

Abstract

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PROVINCIAL GAZETTEERS OF INDIA

BENGAL

VOLUME II

Patna Division¹.—A Division of Bihār in Bengal, lying between 24° 17' and 27° 31' N. and 83° 19' and 86° 44' E. It is bounded on the east by the Bhāgalpur Division, and on the ~~west~~ by the United Provinces, and extends from Nepāl on the ~~west~~ to the Chotā Nāgpur plateau on the south. The head-quarters of the Commissioner, who is assisted by an Additional Commissioner, are at BANKIPORE. The Division includes seven Districts, with area, population, and revenue as shown below :—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Patna . . .	2,075	1,624,985	19,58
Gayā . . .	4,712	2,059,933	19,54
Shāhābād . . .	4,373	1,962,696	21,62
Sāran . . .	2,674*	2,409,509	16,22
Champāran . . .	3,531	1,790,463	6,89
Muzaffarpur . . .	3,035*	2,754,790	13,64
Darbhāngā . . .	3,348*	2,912,611	12,93
Total	23,748	15,514,987	1,10,42

* These figures, which differ from those in the *Census Report* of 1901, are taken from the recent Settlement Reports.

The population increased from 13,118,917 in 1872 to 15,061,493 in 1881 and 15,811,604 in 1891, but in 1901 it had fallen to 15,514,987. This decrease was shared by all the Districts except Muzaffarpur and Darbhāngā. In Champāran the decline is attributable to the unhealthiness of the District, which suffered greatly from malarial affections and severe epidemics of cholera. Elsewhere the decrease is mainly

¹ In 1908 the Patna Division was divided into two Divisions, north and south of the Ganges, called the Tirhut and Patna Divisions.

attributable to the direct and indirect losses caused by the plague epidemic: a very heavy mortality, the flight of the immigrant population, and, in some parts where the epidemic was raging at the time of the Census, the failure of the census staff to effect an exhaustive enumeration. Prior to 1901 the epidemic had been most virulent in Patna, whose population declined by 8.4 per cent. during the decade.

The average density is 653 persons per square mile, a high proportion compared with Bengal as a whole. The population exceeds that of any other Division, and is, in fact, about the same as that of the whole of the Bombay Presidency excluding Sind, while it is nearly three times as numerous as that of Assam. In 1901 Hindus constituted 88.4 per cent. of the total and Musalmāns 11.5 per cent.; there were 7,350 Christians (of whom 3,146 were natives) and 999 Jains.

The Division is intersected from west to east by the Ganges. North of the river it is a flat alluvial formation, ~~which rises~~ gradually towards the foot of the Himālayas, and ~~is~~ ^{possessing} many tracts of great natural fertility. On the other side of the river it contains a strip of alluvium along the bank of the Ganges; but farther south the soil changes, and the surface becomes more undulating and gradually rises till the Chotā Nāgpur plateau is reached. The north of the Division enjoys in ordinary years a comparatively copious rainfall, increasing towards the north, but is peculiarly liable to failure of crops in seasons of deficient rain. In the south a large area is ~~pro-~~ ^{protected} by the SON CANALS system, and elsewhere the undulating surface enables the people to construct small reservoirs from which to water their fields. The four North Ganges Districts have recently been surveyed, and a record-of-rights has been prepared. This tract is the main seat of the indigo industry in Bengal, and its out-turn in 1903-4 amounted to 907 tons, compared with 476 tons from the rest of the Province. The competition of synthetic indigo and the consequent fall in prices have struck a severe blow at the prosperity of the industry, and for some years it has been steadily on the decline. Experiments are being made with a view to increase the out-turn and to improve the quality of the dye, while attempts are being made at Ottur in Muzaffarpur District and elsewhere to revive the old sugar industry.

The Division contains 35 towns and 34,169 villages. The largest towns are PATNA (population, 134,785), GAYĀ (71,288), DARBHANGĀ (66,244), ARRAH (46,170), CHĀPRA (45,991), MUZAFFARPUR (45,617), BIHĀR (45,063), DINAPORE (33,699

including the cantonment), BETTIAH (24,696), SASARĀM (23,644), and HĀJĪPUR (21,398). Owing to the prevalence of plague at the time of the Census (March, 1901), these figures do not in several cases represent the normal populations of the towns; a subsequent enumeration held in July showed the population of Patna city to be 153,739. Patna is, after Calcutta and its suburb Howrah, the largest town in Bengal, and is a very important commercial centre; a large amount of traffic also passes through REVELGANJ, Hājipur, and MOKAMEH, while the workshops of the Bengal and North-Western Railway are at SAMĀSTIPUR.

The Division contains the oldest towns in the Province; and Patna, Gayā, and Bihār have a very ancient history. Patna was the Pātālputra of Greek times and, like Gayā, contains many interesting antiquities. This neighbourhood was at one time a stronghold of Buddhism; and many Buddhist ~~remains~~ occur in Patna, Gayā, Champāran, and Muzaffarpur Districts, among the most important sites being Patna city and BUDDH GAYĀ. Four pillars mark the route taken by Asoka through Muzaffarpur and Champāran on his way to what is now the Nepāl *tarai*. Of these, the pillar near LAURIYĀ NANDANGARH is still almost perfect; another stands near BASĀRH, which is probably the site of the capital of the old kingdom of Vaisālī. Interesting remains of the Muhammadan period are found in the town of Bihār, in the city of Patna, and at Sasarām, ROHTĀSGARH, SHERGARH, and MANER. BUXAR was the scene of the defeat in 1764 of Mīr Kāsim in the battle which resulted in the Dīwāni of Bengal, Bihār, and Orissa being conferred on the East India Company. Several places in the Division are associated with incidents in the Mutiny of 1857. After the outbreak of three regiments at Dinapore, Shāhābād, from which the native army was largely recruited, was for some time overrun with the rebels, and the story of the defence of ARRAH is well-known. Gayā was traversed by several bands of mutineers, and on three occasions the jail was broken open and the prisoners released. At SAGAULI in Champāran District Major Holmes was massacred by his troopers.

Patna District.—District of the Patna Division, Bengal, lying between 24° 57' and 25° 44' N. and 84° 42' and 86° 4' E., with an area of 2,075 square miles. It is bounded on the north by the river Ganges, which divides it from Sāran, Muzaffarpur, and Darbhanga; on the south by Gayā; on the east by Monghyr; and on the west by Shāhābād.

Boun-
daries, con-
figuration,
and hill
and river
systems.

With the exception of the Rājgīr hills in the south, the whole District is quite flat. The land along the bank of the Ganges is slightly higher than that farther inland, and the line of drainage consequently runs from south-west to north-east. The Rājgīr hills, which enter the District from Gayā, consist of two parallel ranges; they seldom exceed 1,000 feet in height, and are for the most part rocky and covered with low jungle. The principal river is the Ganges, which flows for 93 miles along the northern boundary. The Son forms the western boundary of the District for 41 miles, entering it near Mahā-balipur and flowing in a northerly direction to its junction with the Ganges. A little above the junction it is bridged by the East Indian Railway at Koelwār, from which point the river divides into two streams with a fertile island in the middle. The Pūnpūn river, which rises in the south of Gayā District, flows through Patna in a north-easterly direction. At Naubatpur it approaches the Patna Canal, and from that point to the east, and falls into the Ganges at Fatwā. Some 9 miles above this point it is joined by the Morhar. The Panchāna and the Phalgu, though comparatively small streams, are of the greatest value for irrigation purposes; the whole of their water is diverted into artificial channels and reservoirs, and their main channels are mere dried-up beds for the greater part of the year. The Sakri is another river which fails to reach the Ganges owing to the demands made upon it for irrigation purposes, nearly all its water being carried away by two large irrigation channels constructed on its left bank, 12 miles below Bihār town.

Geology. The whole District is of alluvial origin except the Rājgīr hills, which consist of submetamorphic or transition rocks.

Botany. The District contains no forests. The level country near the Ganges has in the rice-fields the usual weeds of such localities. Near villages there are often considerable groves of mango-trees and palmyras (*Borassus flabellifer*), some date-palms (*Phoenix sylvestris*), and numerous examples of the tamarind and other semi-spontaneous and more or less useful species. Farther from the river the country is more diversified; and sometimes a dry scrub jungle is to be met with, containing various shrubs of the order of *Euphorbiaceae*, the *palās* (*Butea frondosa*) and other leguminous trees, and various kinds of *Ficus*, *Schleichera*, *Wendlandia*, and *Gmelina*. The grasses that clothe the drier parts are generally of a coarse character.

Fauna. Antelope are found near the Son river, and wild hog in the *diāras* or islands of the Ganges; bears and leopards occu-

sionally visit the Rājgīr hills, and wolves also are sometimes seen.

Owing to its distance from the sea, Patna has greater extremes of climate than the south and east of Bengal. The mean temperature varies from 60° in January to 88° in May. The highest average maximum is 101° in April. Owing to the dry westerly winds with increasing temperature in March and April, the humidity at that season is very low and averages 50 per cent. With the approach of the monsoon the air gradually becomes more charged with moisture, and the humidity remains steady at about 86 per cent. throughout July and August, falling to 71 per cent. in November. The annual rainfall averages 45 inches, of which 7 inches fall in June, 12.2 in July, 11.3 in August, and 6.9 in September. Floods are common, but they ordinarily do little damage and are seldom attended with loss of life. Heavy floods occurred in 1861, 1870, and 1879; of late years the principal floods were those of 1897 and 1901, when the Son and the Ganges were in flood at the same time.

The District possesses great interest for both the historian and the archaeologist. It was comprised, with the country now included in the Districts of Gayā and Shāhābād, within the ancient kingdom of Magadha, whose capital was at RĀJGĪR, and its general history is outlined in the articles on MAGADHA and BIHĀR, in which Magadha was eventually merged. Its early history is intimately interwoven with that of PATNA CITY, which has been identified with Pātaliputra (the Palibothra of Megasthenes). It contains the town of Bihār, the early Muhammadan capital, from which the sub-province takes its name; and it was a famous seat of Buddhism, and many places in it were visited and described by the Chinese pilgrims, Fa Hian and Hiuen Tsiang.

In recent times two events of special interest to Englishmen stand prominently out and demand separate notice. The one is known as the Massacre of Patna (1763), and the other is connected with the Mutiny of 1857. The former occurrence, which may be said to have sealed the fate of Muhammadan rule in Bengal, was the result of a quarrel between Mīr Kāsim, at that time Nawāb, and the English authorities. The Nawāb, after much negotiation, had agreed to a convention which was also accepted by Mr. Vansittart, the Governor, that a transit duty of only 9 per cent. should be paid by Englishmen, which was far below the rate exacted from other traders. This convention, however, was repudiated by the Council at Calcutta;

and Mīr Kāsim, in retaliation, resolved to abandon all duties whatever on the transit of goods, and to throw open the trade of the country to all alike—a measure still less acceptable to the Company's servants—and their relations with the Nawāb became more strained than ever. In April, 1763, a deputation, consisting of Messrs. Hay and Amyatt, was dispatched from Calcutta to Monghyr, where the Nawāb had taken up his residence; but it was now too late for negotiation. Numerous and fierce disputes had arisen between the *gumāsthas* (agents) of the English and the Muhammadan officers; and an occurrence which happened at Monghyr, while Messrs. Hay and Amyatt were there, hastened the rupture. Mīr Kāsim seized and detained some boat-loads of arms which were passing up the Ganges to Patna, on the ground that the arms were destined to be used against himself, whereupon Mr. Ellis, the chief of the factory at Patna, ordered his sepoy to occupy Patna city, which was done the following morning, ~~Ja.~~ In revenge the Nawāb sent a force in pursuit of Mr. Amyatt, who had been allowed to return to Calcutta, Mr. Hay having been detained as a hostage. Mr. Amyatt was overtaken and murdered near Cossimbazar. In the meantime the Company's sepoy, who had been plundering Patna city, were driven back to the factory, a large number of them being killed. The remainder, less than a sixth of the original force of 2,000 men, after being besieged for two days and nights, fled in boats to the frontier of Oudh, where they ultimately laid down their arms. They were brought back to Patna, to which place had been conveyed Mr. Hay from Monghyr, the entire staff of the Cossimbazar factory, who had also been arrested at the first outbreak of hostilities, and some other prisoners. As soon as regular warfare commenced, Mīr Kāsim's successes came to an end. He was defeated by Major Adams in two battles, at Giriā on August 2, and at Udhuā Nullah on September 5. These defeats roused the Nawāb to exasperation, and on September 9 he wrote to Major Adams: 'If you are resolved to proceed in this business, know for a certainty that I will cut off the heads of Mr. Ellis and the rest of your chiefs, and send them to you.' This threat he carried out on the evening of October 6 with the help of a renegade named Walter Reinhardt, who was known to the Muhammadans as Sumrū. About 60 Englishmen were murdered, their bodies being thrown into a well in the compound of the house in which they were confined, and about 150 more met their death in other parts of Bengal. This massacre was followed by an

active campaign in which the English were everywhere successful; and finally in August, 1765, after the decisive battle of Buxar, the Diwāni of Bihār, Bengal, and Orissa was made over to the East India Company. An English Resident was appointed at Patna; but the administration of Bihār, which then comprised only Patna and Gayā Districts—Patna city itself being regarded as a separate charge—remained in the hands of natives. In 1769 English Supervisors were appointed, and in 1770 a Council for Bihār was established at Patna. In 1774 the Supervisors, who had meanwhile been designated Collectors, and the Council for Bihār were abolished, and a Provincial Council was established at Patna. This lasted till 1781, when Bihār was made a District under a Collector and a Judge-Magistrate. In 1865 it was divided into Patna and Gayā Districts, the Bihār subdivision being included in the former, and nineteen estates were transferred from Patna ~~but~~ in 1869, thus constituting the District as it now exists.

The other important event in the modern history of the District is the mutiny of the sepoys stationed at Dinapore, the military station attached to Patna city. The three sepoy regiments at this place in 1857 were the 7th, 8th, and 40th Native Infantry. General Lloyd, who commanded the station, wrote expressing his confidence in their loyalty, and they were accordingly not disarmed; but as the excitement increased throughout Bihār, and stronger measures seemed in the opinion of the Commissioner, Mr. Tayler, to be necessary, the general, while still apparently relying on the trustworthiness of the men, made a half-hearted attempt at disarming the sepoys. The result was that the three regiments revolted and went off in a body, taking with them their arms and accoutrements, but not their uniforms. Some took to the Ganges, where their boats were fired into and run down by a steamer which was present, and the occupants either shot or drowned. But the majority were wiser, and hastened to the river Son, crossing which they found themselves safe in Shāhābād. The story of what took place in Shāhābād will be found in the article on ARRAH. When the news reached Bankipore that the rebels, headed by Kunwar (or Kuar) Singh, had surrounded the Europeans at Arrah, an ill-fated attempt was made to rescue them. A steamer, which was sent up the river on July 27, stuck on a sandbank. Another steamer was started on the 29th; but the expedition was grossly mismanaged. The troops were landed at 7 p.m., and fell into an ambush about mid-

night. When the morning dawned, a disastrous retreat had to be commenced. Out of the 400 men who had left Dinapore fully half were left behind ; and of the survivors only about 50 returned unwounded. Two volunteers, Mr. McDonell and Mr. Ross Mangles, both of the Civil Service, besides doing excellent service on the march, performed acts of conspicuous daring. The former, though wounded, was one of the last men to enter the boats, and subsequently stepped out of shelter, climbed on the roof of the boat, and released the rudder, which had been lashed by the insurgents, amidst a storm of bullets from the contiguous bank. Mr. Ross Mangles's conduct was equally heroic. He carried a wounded man for 6 miles till he reached the stream, and then swam with his helpless burden to a boat, in which he deposited him in safety. Both these gentlemen afterwards received the Victoria Cross as a reward for their heroism.

Archaeo-
logy.

The chief places of archaeological interest are K ~~MANER, PATNA CITY, BIHAR, and GIRIAK.~~ The village of BARAGAON has been identified as the site of the famous Nālanda monastery, and, with the neighbouring village of Begampur, contains masses of ruins ; at Tetrāwān and Jagdispur are colossal statues of Buddha, and at Telharā and Islāmpur the remains of Buddhist monasteries. Many other Buddhist remains are of more or less interest.

The
people.

The population increased from 1,559,517 in 1872 to 1,750,400 in 1881 and 1,773,410 in 1891, but dropped to 1,624,985 in 1901. The apparent increase between 1872 and 1881 was largely owing to defective enumeration in the former year, while the decrease recorded in 1901 is due mainly to the direct and indirect results of plague, which first broke out in January, 1900, and was raging in the District at the time when the Census was taken, causing many people to leave their homes and greatly increasing the difficulties in the way of the census staff. The loss of population was greatest in the thickly populated urban and semi-urban country along the banks of the Ganges, where the plague epidemic was most virulent. The south of the District, which suffered least from plague, almost held its ground. Plague has since become practically an annual visitation and causes heavy mortality.

The principal statistics of the Census of 1901 are shown in the table on the next page.

The chief towns are PATNA CITY, BIHAR, DINAPORE, MOKAMEH, and BĀRH. The head-quarters are at BANKIPORE, a suburb of Patna. The density is highest along the

Ganges and in the Bihar *thāna*, and least in the Bikram and Masaurhibazurg *thānas* in the south-west and in the Rājgīr hills. There is a considerable ebb and flow of population across the boundary line which divides Patna from the adjoining Districts, and, in addition to this, no less than one-twentieth of its inhabitants have emigrated to more distant places. They are especially numerous in Calcutta, where more than 30,000 natives of this District were enumerated in 1901; these were for the most part only temporary absentees. The vernacular of the District is the Magahī dialect of Bihārī Hindī. Hindus number 1,435,637, or 88·3 per cent. of the total population, and Musalmāns 186,411, or 11·5 per cent.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write.
		Towns.	Villages				
Bankipore .	334	2	975	341,054	1,021	— 15·6	27,778
Dinapore .	424	2	791	315,697	745	— 10·4	21,155
Bārḥ .	526	2	1,075	365,327	695	— 10·5	22,509
Bihār .	791	1	2,111	602,907	762	— 0·9	32,833
District total	2,075	7	4,952	1,624,985	783	— 8·4	104,275

The most numerous Hindu castes are Ahīrs and Goālās (1,200), Kurmīs (181,000), Bābhans (114,000), Dosadhs (96,000), Kāhārs (85,000), Koiris (80,000), Rājputs (64,000), Chamārs (56,000), and Telis (52,000). Agriculture supports 62·3 per cent. of the population, industries 17·1 per cent., commerce 1·2 per cent., and the professions 2·4 per cent. Castes and occupations.

Christians number 2,562, of whom only 139 are natives. Christian missions. The principal missions are the London Baptist Missionary Society, the London Baptist Zanāna Mission, the Zanāna Bible and Medical Mission, and the Roman Catholic Mission. The Zanāna Bible and Medical Mission possesses a well-equipped hospital in Patna city; the Roman Catholic Mission has a boys' school at Kurjī, and a girls' boarding-school and European and native orphanages at Bankipore; while each of the other missions, in addition to evangelistic work, maintains some schools.

The agricultural conditions are fairly uniform throughout; but the Bihār subdivision is for the most part lower than the rest of the District and is better adapted for the cultivation of rice, while the Bārḥ subdivision is more suited to *rabi* crops. General agricultural conditions. The most naturally productive soil is the *diāra* land along the

bank of the Ganges ; but the most valuable of all is the fertile high land in the vicinity of villages, where well-irrigation can be practised, and vegetables, poppy, and other profitable crops are grown.

The chief agricultural statistics for 1903-4 are shown below, in square miles :—

Chief agricultural statistics and principal crops.

Subdivision.	Total.	Cultivated.	Irrigated from canals.	Cultivable waste
Bankipore . . .	334	246	10	12
Dinapore . . .	424	311	60	15
Bārḥ . . .	526	388	.	18
Bihār . . .	791	584	...	27
Total	2,075	1,529	70	72

It is estimated that 10 per cent. of the cultivated area is twice cropped. Rice is the staple food-crop, covering 338 square miles. It is sown in June and reaped in December, in low-lying marsh lands sowing may commence as early as April. The greater portion of it is transplanted, but on inferior lands it is sown broadcast. Of other food-crops, wheat (202 square miles), barley (127 square miles), *jowār* (20 square miles), *maruā* (97 square miles), maize (189 square miles), gram (149 square miles), and other pulses (175 square miles) are widely grown. Maize forms the principal food of the lower classes, except in the Bihār subdivision, where *maruā* takes place. Maize and *rahar* are frequently sown together, the maize being harvested in September, and the *rahar* in March. Oilseeds are sown on 74 square miles, while of special crops the most important is poppy (27 square miles). The poppy cultivated is exclusively the white variety (*Papaver somniferum*), and the crop, which requires great attention, has to be grown on land which can be highly manured and easily irrigated. Potatoes are also grown extensively and are exported in large quantities, the Patna potato having acquired more than a local reputation. Little use has been made of the provisions of the Land Improvement and Agriculturists' Loans Acts ; Rs. 2,800 was advanced under the former Act during the scarcity of 1897.

Cattle.

In addition to the common country cattle, two varieties are bred : one a cross between the Hānsi and the local stocks, and the other with a strong English strain known as the Bankipore breed. The former class are large massive animals, and the bullocks do well for carts or ploughs, though the cows are not very good milkers. The Bankipore breed is the residue of an English stock imported some fifty years ago. The cows are

excellent milkers, but the bullocks are not heavy or strong enough for draught purposes. The breed has fallen off greatly of late years through in-breeding and the want of new blood, but the District board has recently imported two Jersey bulls from Australia. Bullocks from Tirhut are largely used for ploughing. Pasture grounds are very scarce, and the cattle are usually fed on chopped straw or maize-stalks with *bhūsa* (chaff) and pulse, or on linseed cake when available. Persons wishing to buy horses or cattle usually go to the Sonpur fair in Sāran or the Barahpur fair in Shāhābād, a fair at Bihtā with an attendance of 5,000 being the only cattle fair held in Patna District. Of other fairs, that held at Rājgīr is by far the most important.

The whole District depends largely on irrigation. In the Irrigation. head-quarters and Dinapore subdivisions the Patna Canal, a branch of the SON CANALS system, irrigates an area of 70 square miles, and supplies most of the needs of the people. The length of the main canal (in this District) is $42\frac{1}{4}$ miles, that of the parallel channels 24 miles, and that of the distributaries 161 miles. In the Bihār subdivision an extensive system of private irrigation works fed from the local rivers is maintained by the *zamīndārs*. Each *zamīndār* has vested rights in a certain quantity of river water, which he carefully stores by means of embankments and distributes through reservoirs and channels in his ryots. It is estimated that the area thus irrigated in this subdivision is about 437 square miles, out of a total cultivated area of 584 square miles. The system works admirably as long as the rivers which feed the irrigation works bring down their normal quantity of water; but a serious drought, both locally and in the hills of Chotā Nāgpur where these rivers rise, means an almost complete failure of crops. The absence of a proper system of managing the head of supply has caused many old streams to silt up and rendered useless some of the distributing channels. Well-irrigation is universally used for vegetable and poppy cultivation, and occasionally for irrigating the *rabī* crops; one well will irrigate about 2 acres of land. Irrigation from tanks is seldom practised.

Carpets, brocades, embroidery, pottery, brass-work, toys, fire-works, lac ornaments, gold and silver wire and leaf, glass-ware, boots and shoes, and cabinets are made in Patna city; carpets at Sultānganj, Pīrbahor, and Chauk; and embroidery and brocade work in the Chauk and Khwāja Kalan *thānas*. Durable furniture and cabinets are made at Dinapore. The manufactures of the Bārhi subdivision are jessamine oil (*chameli*),

Arts and
manufac-
tures.

coarse cloth, and brass and bell-metal utensils; and of the Bihār subdivision, soap, silk fabrics, tubes for *hukkas*, muslin, cotton cloth, and brass- and iron-ware. Apart from hand industries, certain articles, such as stools and tables, are made in the workshops of the Bihār School of Engineering, and chests for packing opium in the saw-mills of the Patna Opium Factory. Opium is manufactured by Government at a factory in Patna city. Some iron foundries are at work in Bankipore and Dinapore, and an ice and aerated waters factory has been started at Bankipore.

Commerce. The principal imports are rice, paddy, salt, coal, kerosene oil, European cotton piece-goods, and gunny bags; and the principal exports are wheat, linseed, pulses, mustard seed, hides, sugar, tobacco, and opium. A large amount of trade is carried by the railway, but the bulk of it is still transported by river. Patna city, with its 7 or 8 miles of river frontage in the rains and 4 miles in the dry season, is the great centre for all river-borne trade. It is by far the largest mart in the District, and its commanding position for both rail and river traffic makes it one of the principal commercial centres of Bengal. Goods received by rail are there transferred to country boats, bullock-carts, &c., to be distributed throughout the neighbourhood, which in return sends its produce to be ~~railed~~ to Calcutta and elsewhere. The river trade is carried by ~~country~~ boats and river steamers between Patna and Calcutta and ~~on~~ places on the Ganges and Nadiā Rivers, and by country boats between Patna and Nepāl. Trade has declined very greatly of late years, largely owing to the reduced freight charged by the railways on goods booked direct to Calcutta. Other important markets are DINAPORE, BIHĀR, BĀRH, MOKAMEH, Islāmpur, FARWĀ, and HILSĀ. The principal trading castes are Telis, Banyās, and Agarwāls. The transport by river is mostly in the hands of Musalmāns, Tiyaars, and Mallāhs, while the road traffic is almost monopolized by Goālās and Kurmīs.

Railways and roads. The main line of the East Indian Railway runs through the north of the District for 84 miles from east to west, entering at Dumrā station and leaving at the Son bridge. The chief stations are at Mokameh, Bārh, Bakhtiyārpur, Patna, Bankipore, and Dinapore. From Bankipore one branch line runs to Gayā, and another to Gīgha Ghāt in connexion with the Bengal and North-Western Railway ferry-steamer which crosses the Ganges to the terminus of that railway at Sonpur. A third branch line from Mokameh to Mokameh Ghāt establishes another connexion with the Bengal and North-Western Rail-

way. A light railway (18 miles in length) connects Bakhtiyārpur and Bihār. Exclusive of 673 miles of village tracks, the District contains 614 miles of road. Of these, 132 miles are metalled; 10 miles are maintained from Provincial and 17 from municipal funds, and the remainder by the District board. The chief road crosses the north of the District through Bārḥ, Patna city, Bankipore, and Dinapore, leading from Monghyr on the east to Arrah on the west. Other important roads are those from Bankipore to Palāmau, from Bankipore to Gayā, from Fatwā to Gayā, and from Bakhtiyārpur through Bihār to Hazāribāgh.

The Ganges and the Son are the only rivers navigable throughout the year. The former is navigable by steamers, and daily services run between Dīgha and Goalundo, Dīgha and Buxar, and Dīgha and Barhaj, with an extended run every fourth day to Ajodhyā on the Gogra. Paddle steamers ply from Dīgha to Goalundo, but above Dīgha there are shallows and only stern-wheelers can be used. The passenger traffic consists principally of labourers going to Eastern Bengal in search of work, while the goods traffic is mostly in grain, sugar and its products, and piece-goods. The Patna Canal is navigable, and a large number of bamboos are brought down by it to Patna. A bi-weekly service runs on it between Khagaul (Dinapore railway station) and Mahābalipur in the headquarters subdivision via Bikram. Several ferries cross the Ganges, the most important being those from Bankipore and Patna.

Water
communi-
cations

The District is not ordinarily liable to famine, and even in 1896-7 only local scarcity in the Bārḥ and Bihār subdivisions was felt. Test works were opened, but were closed almost at once. The total amount spent on relief was only Rs. 31,000.

The District is divided into five subdivisions: BANKIPORE, BIHAR, BĀRH, PATNA CITY, and DINAPORE. The staff subordinate to the District Magistrate-Collector at headquarters consists of a Joint-Magistrate, an Assistant Magistrate, and seven Deputy-Magistrate-Collectors. The other subdivisions are each in charge of a European officer—in the case of Bihār a Deputy-Magistrate-Collector, and in the case of Bārḥ, Patna city, and Dinapore a member of the Indian Civil Service. The subdivisional officers of Bārḥ and Bihār are each assisted by a Sub-Deputy-Magistrate-Collector.

The civil courts for the disposal of judicial work are those of the District Judge, who is also the Sessions Judge, three

Civil and
criminal
justice.

Sub-Judges and three Munsifs at Patna and one Munsif at Bihār, while the Cantonment Magistrate at Dinapore is vested with the powers of a Small Cause Court Judge. Criminal courts include those of the Sessions Judge, District Magistrate, and the above-mentioned Joint, Assistant, and Deputy-Magistrates. The majority of the cases which come before the courts are of a petty nature. Both burglary and robbery are, however, more common than in the other Districts of the Division. Riots are also numerous, they are generally connected with land disputes or arise out of cattle trespass or questions of irrigation.

Land
revenue.

Under the Muhammadans the District formed part of *Sūbah* Bihār. After it passed under British rule the principal feature of its land revenue history has been the remarkable extent to which the subdivision of estates has gone on. In 1790 there were 1,230 separate estates on the roll held by 1,280 registered proprietors and coparceners, the total land revenue in that year amounting to 4.33 lakhs. In 1865 the Bihār subdivision with 796 estates was added to the District, and four years later 19 estates were transferred from Patna to Tirhut. This brought the District practically to its present dimensions. In 1870-1 the number of estates was 6,075, while the number of registered proprietors had increased to 37,500 and the revenue to 15.08 lakhs. In 1903-4 the number of estates had still farther increased to 12,923 and of proprietors to 107,381, while the current land revenue demand was 14.97 lakhs. This subdivision of estates has added greatly to the difficulty of collecting the revenue and of keeping the accounts connected therewith. The average area held by each ryot, as shown in the latest settlement papers of certain Government estates, varies considerably in different parts of the District, ranging from 1.47 acres in the Bihār to 4.76 acres in the Bārhi subdivision for ordinary holdings, and from 7.30 acres in Dinapore to 13.04 acres in the head-quarters subdivision for the *diāras* or river islands. The rents of homestead land are between Rs. 6 and Rs. 24 per acre. The average rate for clayey soils is about Rs. 5, while land in which sand predominates lets for about half that amount. The best *diāra* lands fetch as much as Rs. 30 per acre, and the worst, where the soil consists chiefly of sand, as little as 12 annas. The rent of this class of land is higher than it would otherwise be, owing to the fact that in many cases the tenant has no occupancy right. About two-thirds of the Bihār subdivision is held under the *bhaoli* or produce-rent system. Three forms

of this system prevail: namely, *dānābandī*, where the value of the produce is estimated and the equivalent of the landlord's share paid in cash or rice; *batai*, where the actual produce is divided; and a fixed payment of rice and *dāl*. The last is comparatively rare. In the case of *dānābandī* and *batai* the shares are supposed to be equal, but actually the landlord gets more than half. A common proportion is known as 'nine-seven,' i.e. out of every 16 seers the landlord takes nine and the tenant seven. The ryot always gets the straw and other by-products.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1	1900-1.	1903-4.
Land revenue . .	14,83	14,76	14,91	15,07
Total revenue . .	27,73	28,03	31,85	32,68

Outside the municipalities of PATNA, BĀRH, BIHĀR, and DINAPORE, local affairs are managed by the District board, with subordinate local boards in each subdivision. The District board has guaranteed 4 per cent. interest on the capital (8 lakhs) of the Bakhtiyārpur-Bihār Light Railway, and it is entitled to receive half of any profits in excess of that amount. In 1903-4 its income was Rs. 2,86,000, of which Rs. 2,09,000 was derived from rates; and the expenditure was Rs. 2,47,000, including Rs. 1,46,000 spent on public works and Rs. 44,000 on education. Local and municipal government.

The District contains 28 police stations and 31 outposts. The force subordinate to the District Superintendent consisted in 1903 of 6 inspectors, 49 sub-inspectors, 88 head constables, and 1,195 constables; there was also a rural police force of 176 *daffadārs* and 3,240 *chaukidārs*. The District jail at Bankipore has accommodation for 453 prisoners, and subsidiary jails at Bārḥ and Bihār for 28 and 25 respectively. Police and jails.

Of the population, 6.4 per cent. (12.3 males and 0.6 females) could read and write in 1901. The total number of pupils under instruction increased from about 27,000 in 1883-4 to 43,941 in 1890-1; it fell to 38,162 in 1900-1, but rose again in 1903-4, when 41,533 boys and 1,689 girls were at school, being respectively 34.4 and 1.3 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,829: namely, two Arts colleges, 25 secondary, 1,255 primary, and 547 special schools. Education.

The expenditure on education was 3.51 lakhs, of which 1.45 lakhs was met from Provincial funds, Rs. 44,000 from District funds, Rs. 7,000 from municipal funds, and 1.16 lakhs from fees. The chief educational institutions are the Patna College, the Patna Medical College, and the Bihār School of Engineering at Patna, the Bihār National College and the female high school at Bankipore, and St. Michael's College for Europeans and Eurasians at Kurji, situated half-way between Bankipore and Dinapore. There is a fine public library at Bankipore.

Medical. In 1903 the District contained altogether 15 dispensaries, of which 5 had accommodation for 163 in-patients. The cases of 142,000 out-patients and 2,500 in-patients were treated, and 12,000 operations were performed. The expenditure was Rs. 39,000, of which Rs. 3,000 was met from Government contributions, Rs. 19,000 from Local and Rs. 14,000 from municipal funds, and Rs. 3,000 from subscriptions. A lunatic asylum at Patna has accommodation for 206 males and 56 females.

Vaccination. Vaccination is compulsory only in municipal areas. During 1903-4 the number of persons successfully vaccinated was 35,000, or 21.7 per 1,000 of the population.

[M. Martin, *Eastern India* (1838); J. R. Hand, *Early English Administration of Bihār* (Calcutta, 1894); and Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xi (1877).]

Bankipore Subdivision.—Head-quarters subdivision of Patna District, Bengal, lying between 25° 12' and 25° 40' N. and 84° 42' and 85° 17' E., with an area of 334 square miles. Owing to plague mortality and defective enumeration consequent on the prevalence of that disease at the time of the Census of 1901, the population recorded in that year was only 341,054, compared with 404,304 in 1891, the density being 1,021 persons per square mile. The subdivision is a flat alluvial tract, bounded on the north by the Ganges. It contains two towns, PATNA CITY (population, 134,785) and PHULWĀRI (3,415); and 975 villages. The head-quarters are at BANKIPORE, which is included within the municipal limits of Patna city.

Dinapore Subdivision.—North-western subdivision of Patna District, Bengal, lying between 25° 31' and 25° 44' N. and 84° 48' and 85° 5' E., with an area of 424 square miles. Owing to plague its recorded population in 1901 was only 315,697, compared with 352,178 in 1891, the density being 745 persons per square mile. The subdivision consists of a

tract bounded on the north by the Ganges and on the west by the Son; the land is a dead level, and the soil is alluvial. It contains two towns, DINAPORE (population, 33,699), the head-quarters, and KHAGAUL (8,126); and 791 villages. Dinapore is a military station in the Lucknow division of the Northern Command; its sepoy garrison was implicated in the Mutiny of 1857. The *dargāh* of Shāh Daulat at MANER, completed in 1616, is a fine specimen of Mughal architecture.

Bārḥ Subdivision.—North-eastern subdivision of Patna District, Bengal, lying between $25^{\circ} 10'$ and $25^{\circ} 35'$ N. and $85^{\circ} 11'$ and $86^{\circ} 4'$ E., with an area of 526 square miles. Owing to plague, its recorded population in 1901 was only 365,327, compared with 408,256 in 1891, the density being 695 persons per square mile. The subdivision consists of a long and somewhat narrow strip of country intersected by tributaries of the Ganges, and bordering that river. It contains two towns, BĀRH (population, 12,164), the head-quarters, and MOKAMEH (13,861), an important railway junction; and 1,075 villages.

Bihār Subdivision.—Southern subdivision of Patna District, Bengal, lying between $24^{\circ} 57'$ and $25^{\circ} 26'$ N. and $85^{\circ} 9'$ and $85^{\circ} 44'$ E., with an area of 791 square miles. Owing to plague its population in 1901 was only 602,907, compared with 608,672 in 1891, the density being 762 persons per square mile. The greater part of the subdivision is a low-lying alluvial plain, which is broken to the south by the Rājgir hills. It contains one town, BIHĀR (population, 45,063), the head-quarters; and 2,111 villages. Bihār town is supposed to have been the capital of the ancient kingdom of Magadha. The neighbourhood contains interesting Buddhist remains, chiefly at BARAGAON, where numerous mounds bury the ruins of Nālanda (a famous seat of learning in the days of the Pāl kings), GIRIAK, and RĀJGĪR. PĀWĀPURĪ contains three Jain temples. HĪLSĀ, near Patna station on the East Indian Railway, is an important market.

Bakhtiyārpur.—Village in the Bārḥ subdivision of Patna District, Bengal, situated in $25^{\circ} 27'$ N. and $85^{\circ} 32'$ E., on the East Indian Railway. Population (1901), 234. It is 22 miles from Patna and 310 miles from Calcutta, and is the nearest station for Bihār town, with which it is connected by a light railway.

Bankipore Town (Bānkipur).—Head-quarters of the Division and District of Patna, Bengal, situated in $25^{\circ} 37'$ N. and $85^{\circ} 8'$ E., on the right bank of the Ganges. It forms part

of the Patna municipality, and is the western suburb of that city, in which most of the Europeans reside. Their houses and the police lines, judicial courts, and other public buildings extend along the river bank. Bankipore possesses a spacious *maidān* and a race-course. To the south of this lies the railway station, which is 338 miles from Calcutta, and is the junction for the Patna-Gayā line and also for the Digha Ghāt branch line connecting the East Indian with the Bengal and North-Western Railway. At once the most prominent and the most curious building in Bankipore is the old Government *golā* or granary, a brick building in the shape of a bee-hive, with two winding staircases on the outside, which have been ascended on horseback; it was erected by Warren Hastings shortly after the great famine of 1769-70 as a storehouse for grain. This storehouse has never been filled, though during the scarcity of 1874 a good deal of grain was temporarily stored here. In times of famine, proposals to fill it are still made by the native press; but the loss from damp, rats, and insects renders such a scheme of storing grain wasteful and impracticable. The jail, which is situated near the railway station, has accommodation for 453 prisoners, who are chiefly employed in the preparation of mustard oil, carpets, and road-metal. The Bihār National College, founded in 1883, teaches up to the B.A. standard, and the Bankipore female high school, founded in 1867, teaches up to the Entrance standard of the Calcutta University.

Baragaon.—Village in the Bihār subdivision of Patna District, Bengal, situated in 25° 8' N. and 85° 26' E. Population (1901), 597. With the neighbouring village of Begampur, Baragaon contains masses of ruins. It has been identified with Vihāragrām, on the outskirts of which, more than a thousand years ago, flourished the Nālanda monastery, at that time the most magnificent and the most celebrated seat of Buddhist learning in the world. It was here that the Chinese traveller Hiuen Tsiang spent a great portion of his pilgrimage in receiving religious instruction.

[*Archaeological Survey Reports of India*, vol. i, pp. 16-34.]

Bār̥h Town.—Head-quarters of the subdivision of the same name in Patna District, Bengal, situated in 25° 29' N. and 85° 43' E., on the Ganges. Population (1901), 12,164. Bār̥h is a station on the East Indian Railway, 299 miles from Calcutta, and has a considerable trade in country produce. Jessamine oil (*chameli*) of a superior quality is manufactured. Bār̥h was constituted a municipality in 1870. The income

during the decade ending 1901-2 averaged Rs. 6,700, and the expenditure Rs. 6,500. In 1903-4 the income was Rs. 10,400, mainly from a tax on persons (or property tax); and the expenditure was Rs. 9,500. The town contains the usual subdivisional offices, a sub-jail with accommodation for 28 prisoners, and an English cemetery.

Bihār Town.—Head-quarters of the subdivision of the same name in Patna District, Bengal, situated in $25^{\circ} 11' N.$ and $85^{\circ} 31' E.$, on the Panchāna river. It is supposed to have been the capital of the ancient kingdom of Magadha, but its early history is involved in obscurity. The remains of an old fort covering 312 acres of ground contain a profusion of ruined Buddhist and Brāhmanical buildings, which prove the site to be a very old one. Among these may be mentioned the remains of the great *vihāra* or college of Buddhist learning, from which Bihār has derived its name. Many ancient Muhammadan mosques and tombs are also found in the town, the most important of which is the tomb of Shāh Sharīf-ud-dīn Makhdūm. The population, which was 44,295 in 1872, increased to 48,968 in 1881, but fell again to 47,723 in 1891, and to 45,063 in 1901; of the last number 29,892 were Hindus and 15,119 Musalmāns. Bihār is connected by a light railway with Bakhtiyārpur on the East Indian Railway. It was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 23,000 and the expenditure Rs. 22,000. In 1903-4 the income was Rs. 32,000, including Rs. 19,000 derived from a tax on persons (or property tax) and Rs. 6,000 from a conservancy rate; and the expenditure was Rs. 31,000. Bihār contains the usual public buildings; the sub-jail has accommodation for 25 prisoners.

[*Epigraphia Indica*; *Archaeological Survey of India*, vol. ii, pp. 291-4; *Journal of the Asiatic Society of Bengal*, vol. xxxvii, p. 7, and vol. xii, p. 300.]

Dinapore Town (*Dānāpur*).—Town in Patna District, Bengal, situated in $25^{\circ} 38' N.$ and $85^{\circ} 3' E.$, $3\frac{1}{2}$ miles from Dinapore railway station on the East Indian Railway. Population (1901), 33,699, including 10,841 within cantonment boundaries. Of the total, 24,575 were Hindus, 8,105 Musalmāns, and 1,019 Christians. The military force ordinarily quartered at Dinapore, which belongs to the Lucknow division of the Northern Command, consists of four companies of British infantry, six companies of Native infantry, and a field battery. The town with the subdivision is under a subdivisional officer, and the cantonment under a special Cantonment Magistrate.

The road from Dinapore to Bankipore is lined with houses and cottages; in fact Dinapore, Bankipore, and Patna may be regarded as forming one continuous narrow city hemmed in between the Ganges and the railway. The town is noted for its cabinet-ware; it also contains an iron-foundry and printing and oil presses. It was constituted a municipality in 1887. The municipal income during the decade ending 1901-2 averaged Rs. 17,000, and the expenditure Rs. 14,000. In 1903-4 the income was Rs. 27,000, including Rs. 11,000 derived from a tax on houses and lands; and the expenditure was Rs. 20,000. The annual receipts and expenditure of the cantonment fund during the ten years ending 1901 averaged Rs. 21,600 and Rs. 21,700 respectively; in 1903-4 the income was Rs. 28,000 and the expenditure Rs. 26,000.

The Mutiny of 1857 in Patna District originated at Dinapore. The three sepoy regiments stationed there broke into open revolt in July and went off *en masse*, the majority effecting their escape into Shāhābād District, where they shortly afterwards besieged Arrah. An expedition which was sent from Dinapore to relieve Arrah failed disastrously, but was marked by acts of individual heroism; an account of this attempt will be found in the article on PATNA DISTRICT.

Fatwā.—Village in the Bārī subdivision of Patna District, Bengal, situated in $25^{\circ} 30'$ N. and $85^{\circ} 19'$ E., on the East Indian Railway, 7 miles from Patnā city, at the junction of the Pūnpūn with the Ganges. Population (1901), 857. *Tasar* cloth is manufactured, and tablecloths, towels, and handkerchiefs are woven by Jolāhās.

Giriak.—Village in the Bihār subdivision of Patna District, Bengal, situated in $25^{\circ} 2'$ N. and $85^{\circ} 32'$ E., on the Panchāna river, and connected with Bihār town by a metalled road. Population (1901), 243. South-west of the village, and on the opposite side of the river, stands the peak at the end of the double range of hills commencing near Gayā, which General Cunningham identifies with Fa Hian's solitary mountain, suggesting at the same time that its name is derived from Ekigri, or 'one hill'; but his views have not met with universal acceptance. Dr. Buchanan-Hamilton has described the ruins of Giriak, which are full of archaeological interest. They were originally ascended from the north-east, and remains still exist of a road about 12 feet wide, paved with large blocks, and winding so as to procure a moderate gradient. At the west end of the ridge, a steep brick slope leads up to a platform, on which are some granite pillars, probably part of

an ancient temple. East of the ridge is an area 45 feet square, called the *chabutra* of Jarāsandha, the centre of which is occupied by a low square pedestal, supporting a solid brick column 68 feet in circumference and 55 feet in height. It is popularly believed that Krishna crossed the river at this point on his way to challenge Jarāsandha to combat, and a bathing festival is held at the spot annually in the month of Kārtik to commemorate the event.

[M. Martin, *Eastern India*, vol. i, pp. 78–80; and *Archæological Survey of India Reports*, vol. i, pp. 16–34, and vol. viii.]

Hilsā.—Village in the Bihār subdivision of Patna District, Bengal, situated in 25° 19' N. and 85° 17' E., 13 miles from Fatwā station on the East Indian Railway, with which it is connected by road. Population (1901), 2,478. Hilsā is a large market, where a brisk trade in food-grains and oilseeds is carried on with Patna, Gayā, Hazāribāgh, and Palāmau.

Khagaul.—Town in the Dinapore subdivision of Patna District, Bengal, situated in 25° 35' N. and 85° 3' E., a short distance to the south of Dinapore. Population (1901), 8,126. Dinapore railway station is just outside the town, which has grown into importance only since the opening of the railway. It is the head-quarters of a company of East Indian Railway volunteers.

Maner.—Village in the Dinapore subdivision of Patna District, Bengal, situated in 25° 38' N. and 84° 53' E., a few miles below the junction of the Son with the Ganges, 10 miles from Dinapore cantonment and 5 miles from Bihtā station on the East Indian Railway. Population (1901), 2,765. Maner is a very old place, being mentioned in the *Ain-i-Akbari*. The chief antiquities are the tombs of Makhdūm Yahia Maner and Makhdūm Shāh Daulat. The latter, which was built in 1616, stands on a raised platform, and at each corner rises a slender pillar of graceful proportions and exquisite beauty. It has a great dome, and the ceiling is covered with delicately carved texts from the Korān. Two annual fairs are held at Maner.

Mokameh (*Mukāmā*).—Town in the Bārī subdivision of Patna District, Bengal, situated in 25° 25' N. and 85° 53' E., on the right bank of the Ganges. Population (1901), 13,861. It is a station on the East Indian Railway, 283 miles from Calcutta, and is a junction for passengers proceeding by the Bengal and North-Western Railway. The town contains a large number of European and Eurasian railway employés, and is an important centre of trade.

Patna City (or Azīmābād).—Chief city of Patna District,

Bengal, situated in $25^{\circ} 37'$ N. and $85^{\circ} 10'$ E., on the right bank of the Ganges a few miles below its junction with the Son. Included within the municipal limits is BANKIPORE, the administrative head-quarters of Patna District and Patna Division. The city is situated on the East Indian Railway, 332 miles from Calcutta ; and though its prosperity has somewhat diminished of late years, it still possesses an important trade, its commanding position for both rail and river traffic making it one of the principal commercial centres of Bengal, and, after Calcutta, the largest town in the Province. Buchanan-Hamilton estimated the population at 312,000 ; but his calculation referred to an area of 20 square miles, whereas the city, as now defined, extends over only 9 square miles. The population returned in 1872 was 158,900 ; but the accuracy of the enumeration was doubted, and it was thought that the real number of inhabitants was considerably greater. It is thus probable that the growth indicated by the Census of 1881, which showed a population of 170,654, was fictitious. There was a falling off of 5,462 persons between 1881 and 1891, while the Census of 1901 gave a population of only 134,785, which represents a further decrease of more than 18 per cent. This was due mainly to the plague, which was raging at the time of the Census and not only killed a great number but drove many more away. A second enumeration taken five months later disclosed a population of 153,739. The decrease on the figures of 1891, which still amounted to 7 per cent., may be ascribed, in addition to the actual loss by deaths from plague, to a declining prosperity due to the gradual decay of the river-borne trade. The population at the regular Census of 1901 included 99,381 Hindus, 34,622 Musalmāns, and 683 Christians.

Patna has a very ancient history. It is to be identified with the Pātaliputra of ancient India, the Palibothra of the Greeks, and the Kusumapura of the early Gupta emperors. Megasthenes describes the city as situated on the south bank of the Ganges at the confluence of another large river, *Erannobous* (the Greek form of *Hiranya-Vāhu*) or Son, which formerly joined the Ganges immediately below the modern city of Patna. The tradition of this junction still lingers among the villagers to the south-west of Patna, where there is an old channel called the Marā ('dead') Son.

Regarding the origin of the city various legends exist. The most popular ascribes it to a prince Putraka, who created it with a stroke of his magic staff and named it in honour of his

wife the princess Pātali. This story is found in the *Kathā Sarit Sāgar* and in Hiuen Tsiang's travels. Diodorus attributes the foundation of Palibothra to Herakles, by whom perhaps he may mean Balarām, the brother of Krishna. According to the *Vāyu Purāna* and the *Sutapitaka*, the city of Kusumapura or Pātaliputra was founded by the Sisunāga king Udaya, who ruled in Magadha towards the end of the fifth century B.C. ; but the Buddhist accounts place its origin in the reign of Udaya's grandfather, Ajātasatru. When Buddha crossed the Ganges on his last journey from Rājagriha to Vaisālī, the two ministers of Ajātasatru, king of Magadha, were engaged in building a fort at the village of Pātali as a check upon the ravages of the people of Vrijī, and he predicted that the fort would become a great city. The Nandas who overthrew the Sisunāgas removed the capital of Magadha to Pātaliputra from Rājagriha, the modern Rājgīr, in the south-east of Patna District. Under Chandragupta, the Greek Sandrokottos, who established the Maurya dynasty in 321 B.C., Pātaliputra became the capital of Northern India. It was during the reign of this king that in 305 B.C., or a little later, Megasthenes, whose account of it has been preserved by Arrian, visited the city. He says that Palibothra, which he describes as the capital city of India, is distant from the Indus 10,000 stadia, i.e. 1,149 miles, or only 6 miles in excess of the actual distance. He adds that the length of the city was 80, and the breadth 15 stadia ; that it was surrounded by a ditch 30 cubits deep ; and that the walls were adorned with 570 towers and 64 gates. According to this account, the circumference of the city would be 190 stadia or 24 miles. Strabo, Pliny, and Arrian call the people Prasii, which has been variously interpreted as ' eastern ' (*prachya*) people, or the men of Parāsa, a name applied to Magadha, derived from the *palās*-tree (*Butea frondosa*).

Asoka ascended the throne in 272 B.C., and was crowned at Pātaliputra in 269 B.C. During his reign of forty years he is said to have changed the outward appearance of Pātaliputra. He replaced or supplemented the wooden walls by masonry ramparts, and filled his capital with palaces, monasteries, and monuments, the sites of which have not, as was once thought, been washed away by the river, but still remain to be properly excavated and identified by archaeologists. Dr. Waddell has already shown that Bhiknapahāri, an artificial hill of brick débris over 40 feet high and about a mile in circuit, now crowned by the residence of one of the Nawābs of Patna, is identical with the hermitage hill built by Asoka for his brother

Mahendra ; a representation of the original is still kept at the north-east base of the hill, and is worshipped as the Bhikna Kunwar. The site of Asoka's new palace Dr. Waddell places at Sandalpur. South of this, near the railway in Buland Bagh, is a curious big flat stone, to which the marvellous story still clings that it cannot be taken away but always returns to its place. This, in Dr. Waddell's opinion, is the actual stone bearing the footprint of Buddha which was seen and described by the Chinese pilgrims, Fa Hian and Hiuen Tsiang. Fragments of a polished column, the outline of monastic cells, carved stones, and other remains point to Kumāhar as the site of the old palace. In the adjacent hamlet of Nayātala is a sculptured pillar in highly polished hard sandstone of a pair of Mātris, or 'divine mothers,' in the archaic style seen in the Bhārhut sculptures. In the land to the south, which is still called Asobhuk or 'Asoka's plot,' are situated brick ruins known as Chotāpahāri and Barāpahāri (probably the hermitage-hill of Upa Gupta who converted Asoka), while in the Panchpahāri Dr. Waddell recognizes the five relic *stūpas* of exceptional grandeur which Asoka is said to have built. According to tradition, the third Buddhist council at Pātaliputra was held in the seventeenth year of Asoka's reign. With the death of that monarch in 231 B.C. the city disappears from history for 530 years, during which period the first empire of Northern India was destroyed by the Scythians and Andhras. But in A.D. 319 the city, now under the name of Kusumapura, witnessed the birth of a second empire, that of the Gupta kings. Chandra Gupta I married a Lichchavi princess of Pātaliputra. The date of his coronation, March 8, A.D. 319, marks the beginning of a new era in Indian history. Though Kusumapura is undoubtedly identical with Pātaliputra or Patna, yet of this second line of emperors not a single trace remains except a broken pillar which stands among some Muhammadan graves near the *dargāh*. Samudra Gupta, the son and successor of Chandra Gupta I, greatly enlarged the empire and removed the capital from Pātaliputra or Kusumapura westwards ; but Pātaliputra was still a sacred place for the Buddhists. About 406, during the reign of Chandra Gupta II, Fa Hian, after visiting Upper India, arrived at Pātaliputra, of which he gives a short description, and resided there for three years while learning to read the Sanskrit books and to converse in that language.

The next description of Patna is supplied by Hiuen Tsiang, who entered the city after his return from Nepāl, in 637, more

than a hundred years after the fall of the Gupta empire. At that time Magadha was subject to Harshavardhana, the great king of Kanauj. Hiuen Tsiang informs us that the old city, called originally Kusumapura, had been deserted for a long time and was in ruins. He gives the circumference at $70 \frac{1}{2}$, or $11 \frac{2}{3}$ miles, exclusive of the new town of Pātaliputra.

Little is known of the mediaeval history of Patna. In the early years of Muhammadan rule the governor of the province resided at the town of Bihār. During Sher Shāh's revolt Patna again became an independent capital, but it was reduced to subjection by Akbar. Aurangzeb made his grandson Azīm governor, and the city thus acquired the name of Azīmābād, which is still in use among Muhammadans. The two important events in the modern history of Patna city—the massacre of 1763, and the mutiny of the sepoy at Dinapore cantonments in 1857—have been described in the account of PATNA DISTRICT. The old walled city of Patna extended about $1 \frac{1}{2}$ miles from east to west and three-quarters of a mile from north to south. It is to this day very closely built, mainly with mud houses, but the fortifications which surrounded the city have long since disappeared.

Patna was constituted a municipality in 1864. The municipal limits include the suburb of Bankipore on the west. The income during the decade ending 1901-2 averaged 2.18 lakhs, and the expenditure 1.91 lakhs. In 1903-4 the income was 1.93 lakhs, including Rs. 83,000 from a tax on houses and lands, Rs. 21,000 from a conservancy rate, Rs. 16,000 from tolls, Rs. 13,000 from a tax on vehicles, and Rs. 35,000 as grants. The incidence of taxation was R. 0-14-5 per head of population. In the same year the expenditure amounted to 1.74 lakhs, the chief items being Rs. 5,000 spent on lighting, Rs. 10,000 on drainage, Rs. 48,000 on conservancy, Rs. 20,000 on medical relief, Rs. 7,000 on a new hospital building, Rs. 31,000 on roads, and Rs. 6,000 on education. A drainage scheme was carried out between 1893 and 1895 at a cost of 2.68 lakhs, but was defective owing to its being unaccompanied by any flushing scheme. Two complementary schemes were carried out in 1894 and 1900, by which $4 \frac{1}{2}$ square miles of the total area are now flushed.

For administrative purposes the city, excluding Bankipore but including a few outlying villages known as the rural area of the City subdivision, has been constituted a subdivision under a City Magistrate, who holds his court at Gulzarbāgh in the heart of the city. The courts and jail are situated at

Municipality.

Description.

BANKIPORE. Patna is the head-quarters of the Commissioner and Additional Commissioner, the Bihār Opium Agent, a Deputy-Inspector-General of police, a Deputy-Sanitary Commissioner, and the Executive Engineer of the Eastern Son division. The Patna College is a fine brick building at the west end of the city. Originally built by a native as a private residence, it was purchased by Government and converted into law courts. In 1857 the courts were removed to the present buildings at Bankipore; and in 1862 the college was established here. It possesses a chemical laboratory, and a law-department and collegiate school are also attached to it. Close by is the Medical College, in front of which a new hospital has been erected. In this neighbourhood also stands the Oriental Library, founded by Maulvi Khuda Bakhsh Khān Bahādui, C.I.E., the present librarian, who has collected a number of valuable Persian and Arabic manuscripts. This library is subsidized by the Bengal Government, by the Nizām of Hyderābād, and by private subscriptions. Farther east at Afzalpur, on the ground formerly occupied by the Dutch factory, have been erected some fine buildings for the Bihar School of Engineering, which was opened in August, 1900, out of funds originally collected to commemorate the visit of the Prince of Wales to Patna in 1876. It has a good workshop for practical work, and the course of studies is the same as that of the apprentice department of the Civil Engineering College at Sibpur. About 3 miles further east, in the quarter called Gulzarbāgh, the Government manufacture of opium is carried on. Patna is one of the two places in British India where opium is manufactured by Government. The opium is made up into cakes, weighing about $3\frac{1}{2}$ lb. and containing about 3 lb. of standard opium. These are packed in chests (40 in each) and sent to Calcutta, whence most of them are exported to China. The opium buildings are on the old river bank, and are separated from the city by a high brick wall. Beyond Gulzarbāgh lies the city proper. The western gate is, according to its inscription, 5 miles from the *golā* at Bankipore and 12 miles from Dinapore. In the southern quarter called Sādikpur, a market has been laid out on the ground formerly occupied by the Wāhhābi rebels. Nearly opposite to the Roman Catholic Church is the grave where the bodies of Mīr Kāsim's victims were ultimately deposited. It is covered by a pillar, built partly of stone and partly of brick, with an inlaid tablet and inscription. The chief Muhammadan place of worship is the monument of Shāh Arzāni, who died here in

1623, and whose shrine is frequented by both Muhammadans and Hindus. An annual fair is held on the spot in the month of Zikad, lasting for three days and attracting about 5,000 votaries. Adjacent to the tomb is the Karbala, where 100,000 people attend during the Muharram festival. Close by is a tank dug by the saint, where once a year crowds of people assemble, and many of them bathe. The mosque of Sher Shāh is probably the oldest building in Patna and the *madrasa* of Saif Khān the handsomest.

- [L. A. Waddell, *Pātaliputra* (Calcutta, 1892), and *Report on the Excavations at Pātaliputra* (Calcutta, 1903).]

Pāwapuri (*Apāpāpuri*, the 'sinless town').—Village in the Bihār subdivision of Patna District, Bengal. Population (1901), 311. Mahāvīra, the last of the Jain saints, is said to have been buried in the village, which possesses three Jain temples and is a great place of pilgrimage for the Jains.

Phulwāri.—Town in the head-quarters subdivision of Patna District, Bengal, situated in 25° 34' N. and 85° 5' E. Population (1901), 3,415.

Rājgīr.—Ruined town in the Bihār subdivision of Patna District, Bengal, situated in 25° 2' N. and 85° 26' E. Population (1901), 1,575. It was identified by Dr. Buchanan-Hamilton with Rājagriha, the residence of Buddha and capital of the ancient Magadha; and by General Cunningham with Kusā-nagara-pura ('the town of the kus grass'), visited by Hiuen Tsiang and called by him Kiu-she-lo-pu-lo. Rājagriha, meaning 'the royal residence,' was also known as Giribrājā, 'the hill surrounded'; and under this name the capital of Jarāsandha, king of Magadha, is mentioned in both the Rāmāyana and the Mahābhārata. It is also described by Fa Hian and Hiuen Tsiang, the Chinese pilgrims, the latter of whom gives an account of the hot springs found at this place. The five hills surrounding the town, mentioned in the Mahābhārata and in the Pāli chronicles, have been examined by General Cunningham. The first, Baibhār, is identified with the Webhars mountain of the Pāli chronicles, on the side of which was the famous Sattapanni Cave, where the first Buddhist synod was held in 543 B.C. The second hill, Ratnāgiri, is that called by Fa Hian 'The Fig-tree Cave,' where Buddha meditated after his meals, and is identical with the Rishigiri of the Mahābhārata and the Pandao of the Pāli annals. A paved zigzag road leads to a small temple on the summit of this mountain, which is still used by Jains. The third hill, Bipula, is clearly the Wepullo of the Pāli chronicles and the

Chait-yaka of the Mahābhārata. The other two hills have Jain temples.

Traces of the outer wall around the ancient town of Rājagriha may still be seen, about $4\frac{5}{8}$ miles in circumference. The new Rājgīr is about two-thirds of a mile north of the old town. According to Buddhist records, it was built by Sienika or Bimbāsāra, the father of Ajātasatru, the contemporary of Buddha. Dr. Buchanan-Hamilton states that the town stood upon the north-west corner of a fort, which is an irregular pentagon in form and apparently of great antiquity. At the south-west extremity are traces of a more modern fort, with stone walls, which might have been a kind of citadel. It occupies a space of about 600 yards. The eastern and northern faces had no ditch, but there is a strong stone wall about 18 feet thick, with circular projections at intervals. The eastern approach to Rājagriha was protected by a stone wall, 20 feet in width and running zigzag up the southern slopes of the hills. A watch-tower on the extreme eastern point of the range corresponded with a similar tower immediately over the town. One tower still exists, and also the foundations of the second tower. South of the ancient town of Rājagriha are found inscriptions on huge slabs of stone, which form a natural pavement. So far as is known, the characters have never been deciphered.

[*Archaeological Survey of India*, vol. i, pp. 16-34, and vol. viii, pp. 85-100.]

Silao.—Village in the Bihār subdivision of Patna District, Bengal, situated in $25^{\circ} 5' N.$ and $85^{\circ} 24' E.$ Population (1901), 1,502. It is a large grain mart where the best table rice in Patna is sold, and is also noted for its sweetmeats and parched rice sold to pilgrims *en route* to Rājgīr.

Gayā District.—District in the Patna Division of Bengal, lying between $24^{\circ} 17'$ and $25^{\circ} 19' N.$ and $84^{\circ} 0'$ and $86^{\circ} 3' E.$, with an area of 4,712 square miles. It is bounded on the north by Patna District; on the east by Monghyr and Hazaribāgh; on the south by Hazaribāgh and Palāmau; and on the west by Shāhābād, from which it is separated by the Son river.

The southern part of the District is elevated and occupies the declivity from the Chotā Nāgpur plateau, from which numerous ridges and spurs project into the plains. About 10 miles south of Gāya town the surface becomes more level; but semi-isolated ranges stand out from the plains, and still farther to the north separate ridges and isolated peaks crop up here and there. The chief hills are: the Durvāsarishi

Boundaries, configuration, and hill and river systems.

and Mahābar hills in the south of the Nawāda subdivision, which rise to a height of 2,202 and 1,832 feet above sea-level, the former being the highest point in the District; the Māher (1,612 feet) and Hasrā hills, the Ganjās and Bhindas, the Jethian range running from the neighbourhood of Buddh Gayā to Rājgīr and Giriak, and the Pahrā, Cherkī, and Gayā hills in the head-quarters subdivision; the Pawai, Dugul, and Pachār hills in the Aurangābād subdivision; and the Barābar and Kowādol hills in the Jahānābād subdivision. The general level falls somewhat rapidly towards the north, and numerous hill streams from the highlands of Chotā Nāgpur flow northwards across the District in more or less parallel courses. The chief of these from east to west are the Sakri, Dhanarjī, Tilayā, Dhādhār, Paimār, Phalgu, Jamunā, Morhar, Dhawā, Madar, Adrī, and Pūnpūn; and the Son, which forms the western boundary of the District. The two last-named rivers are the only ones which reach the Ganges. The water brought down by the other streams is nearly all used up in the network of *pains* or artificial irrigation channels; the Dhawā and Madar are tributaries of the Pūnpūn, and the Morhar and Phalgu also eventually join that river; while other streams, after being thus diverted for the purposes of irrigation, cannot be traced or mingle in the rainy season in a huge *jhil* in the Bārḥ subdivision of Patna. The Phalgu, which is formed by the junction of the Lilājān and Mohana rivers about 2 miles below Buddh-Gayā, flows past the town of Gayā, and then northwards under the foot of the Barābar hills. This river and the Pūnpūn are regarded by the Hindus as sacred, and to bathe in them is the duty of every pilgrim who performs the Gayā *tirtha* or pilgrimage. The most important river is the Son, its bed being nearly as broad as that of the Ganges, though it becomes almost dry in the hot months. During the rains the current is very rapid and navigation difficult, in consequence of which the river is used only by small craft up to about 20 tons burden for a few months in the year. Between Barun on the Gayā bank and Dehrī on the Shāhābād side a stone causeway leads the grand trunk road across the bed. Just above this causeway is the great anicut of the Son Canals system, and below the causeway the river is spanned by one of the longest railway bridges in the world, comprising 98 spans of 100 feet each; it is made of iron girders laid on stone-built pillars.

A considerable part of the District is occupied by the Geology. Gangetic alluvium, but older rocks rise above its level chiefly in the south and east. These are composed for the most part

of a foliated gneiss, consisting of a great variety of crystalline rocks forming parallel bands and known as 'Bengal gneiss.' It is a subdivision of the Archaean system, which contains the oldest rocks of the earth's crust. Scattered at intervals amid the 'Bengal gneiss' in the east of the District are several outcrops of another very ancient series, resembling that described in Southern India under the name of Dhārwar schists and constituting another subdivision of the Archaean system. Owing to the predominance of massive beds of quartzite, these beds stand out as abrupt ridges and constitute all the most conspicuous hills of the District. Not only are these rocks everywhere altered by 'regional metamorphism,' caused by the great pressure that has thrown them into close-set synclinal and anticlinal folds, as expressed by the elongated shape of the ridges and high dips of the strata with the inducement of slaty cleavage; but they have also been affected to a great extent by contact metamorphism from the intrusion of great masses of granite and innumerable veins of coarse granitic pegmatite, by which the slates have been further transformed into crystalline schists. In its more massive form the granite is relatively fine-grained and very homogeneous, and it weathers into great rounded hummocks that have suggested the name of 'dome-gneiss' by which it is sometimes known. It is the narrow sheets of the same intrusive group, where they cut across the metamorphosed schists as excessively coarse granitic pegmatites, that are of most economical importance on account of the mica which they contain.

The Rājgir hills, consisting of slaty schists and quartzites, are less metamorphosed; but contact effects are well seen in the Māher hills, and in the detached spurs forming the south-western continuation of the Rājgir range near Gayā, where idols and utensils are extensively wrought from the soft serpentinous rock of the converted schists.

The Tālcher rocks, which constitute the basement beds of the coal-bearing Gondwāna series, are seen at the small village of Gangti, 20 miles south-west-by-west of Sherghāti; and also 4 miles west-by-south of Imānganj, in the bed of the Morhar river, where they occupy a small outcrop entirely surrounded by alluvium. This outcrop is of great interest, as indicating the possibility that coal-measures may exist beneath the alluvial formation in this part of the Gangetic plain¹.

¹ T. H. Holland, 'Mica Deposits of India,' *Memoirs, Geological Survey of India*, vol. xxxiv, pt. i. This account was contributed by Mr. E. Vredenburg, Deputy-Superintendent, Geological Survey of India.

In the north the rice-fields have the usual weeds of such Botany. localities. Near villages there are often considerable groves of mango-trees and palmyras (*Borassus flabellifer*), some date-palms (*Phoenix sylvestris*), and numerous isolated examples of *Tamarindus* and other semi-spontaneous and more or less useful species. There are no Government forests, but the hills on the south are completely covered with dense jungle; here the fuel-supply of the District is obtained, and the lac industry is a considerable source of income to the landlords. The principal trees are the *pīpal* (*Ficus religiosa*), *nām* (*Melia Azadirachta*), banyan (*Ficus indica*), *siris* (*Albizia odoratissima*), *mahuā* (*Bassia latifolia*), *palās* (*Butea frondosa*), *sissū* (*Dalbergia Sissoo*), tamarind (*Tamarindus indica*), *jāmun* (*Eugenia Jambolana*), *sāl* (*Shorea robusta*), *babūl* (*Acacia arabica*), cotton-tree (*Bombax malabaricum*), and *kahuā* (*Terminalia Arjuna*). Flowering shrubs and creepers grow luxuriantly in the hills after the rains; and during the cold season wild plums and other small edible berries are common in these tracts, and form part of the food-supply of the poorer classes.

Tigers are found in the hills in the south, and leopards, Fauna. hyenas, bears, and wild hog on most of the hills in the District. *Sāmbār* (*Cervus unicolor*), spotted deer (*Cervus axis*), 'ravine deer' (*Gazella bennetti*), four-horned antelope (*Tetracerus quadricornis*), and barking-deer (*Cervulus muntjac*) live in the jungles in the south; but their numbers are rapidly decreasing. The antelope (*Antelope cervicapra*) is still occasionally found. Wolves and wild dogs are comparatively rare. A few *nīlgai* (*Boselaphus tragocamelus*) still frequent the banks of the Son. Peafowl, jungle-fowl (*Gallus ferrugineus*), black partridge (*Francolinus vulgaris*), grey partridge (*Francolinus pondicerianus*), and spur-fowl (*Galloperdix sp.*) are found in and along the skirts of the southern hills.

By reason of its distance from the sea, Gayā has greater Climate. extremes of climate than the south and east of Bengal. The temperature varies from 64° in January to 93° in May, and the highest average maximum is 105° in May. Owing to the hot and dry westerly winds which prevail in March and April, the humidity at that season averages only 51 per cent. With the approach of the monsoon the humidity increases, and then remains steady at from 84 to 87 per cent. throughout July and August. The annual rainfall averages 42 inches, of which 5.6 fall in June, 12.1 in July, 11.8 in August, and 6.4 in September. The strength of the monsoon

during the month of September is of special importance to the cultivator, as the winter rice harvest is largely dependent on a good supply of rain at that season.

Natural
calamities.

Local floods are occasionally caused by the rivers breaching their banks after abnormally heavy rain in the hills, or by a river leaving its bed and appropriating the channel of a *pain* or irrigation canal. A case of this nature occurred in 1896-7, when the Sakri river changed its course and flooded the lands of some villages in the Nawāda subdivision, converting a considerable area of fertile land into a sandy waste. In September, 1901, in consequence of the sudden simultaneous rise of the Son and the Ganges, the former river topped its bank near Arwal and flooded Badrābād and other villages, many mud-built houses falling in.

History.

The modern District was comprised, with the country now included in Patna and Shāhābād, within the ancient kingdom of MAGADHA. Both Patna and Gayā, which formed part of the Muhammadan *Sūbah* of BIHĀR, passed into the hands of the English in 1765, being at first administered from Patna. This arrangement lasted till 1781, when Bihār was made into a District under a Collector and a Judge-Magistrate. In 1814 the south of the District was placed under the jurisdiction of a special Joint-Magistrate, stationed at Sherghāti. In 1865 Gayā was separated from Patna and constituted an independent Collectorate.

Though Gayā was not the scene of fighting during the Mutiny of 1857, yet an incident took place in the District worthy of record. The sepoys in the cantonments at Dinapore mutinied in July and escaped into Shāhābād. After the first attack upon them by a British force had resulted in disaster, orders were issued by the Commissioner of Patna to all the civil officers within his jurisdiction to withdraw their establishments and retire on Dinapore. A small garrison of the 64th Regiment, together with a few Sikhs, was then stationed at Gayā town. In obedience to the written orders of the Commissioner, the handful of soldiers and civilians at Gayā started on the road to Patna, leaving behind about 7 lakhs in the treasury. But on the way bolder counsels prevailed. Mr. Money, the Magistrate of the District, and Mr. Hollings, an uncovenanted official in the Opium Agency, determined to return to Gayā and save what they could from the general pillage that would inevitably follow upon the abandonment of the town. The detachment of the 64th Regiment was also sent back. The town was found still at

peace. By the time that carriage had been collected for the treasure the Patna road had become unsafe, and the only means of retreat was by the grand trunk road to Calcutta. As soon as the little party had started a second time, they were attacked by a mixed rabble of released prisoners and the former jail-guards. They repulsed the attack, and conveyed the treasure safely to Calcutta.

The District is full of places of the highest archaeological interest, and the rocky hills teem with associations of the ancient religion of Buddha. As a place of Hindu pilgrimage, the town of GAYĀ is of comparatively modern interest; but at BUDDH (or Bodh) GAYĀ, 7 miles to the south, are remains of great religious and archaeological importance. Many Buddhist images are to be found in the neighbourhood and also at Punāwān, 14 miles east of Gayā. Two miles south of Punāwān is Hasrā hill, identified by Dr. Stein with the Kukkuṭapada-giri of Fa Hian and Hiuen Tsiang. There are many scattered remains of undoubted Buddhist origin in the valley between the Sobhnāth hill and Hasrā hill proper, while in the neighbouring village of Bishnupur Tarwā are some finely cut Buddhist images. At Kurkiḥār, 7 miles to the north-east, is a large mound, from which many Buddhist sculptures have been unearthed. About 11 miles to the north-east lies the village of Jethian, identified with the Yashtivāna of Hiuen Tsiang, in the neighbourhood of which there are several sites associated with the wanderings of Buddha. At Konch is a curious brick-built temple, and traces of Buddhist influence are observable in sculptures round about. Seven miles south-east of Gayā is the Dhongrā hill, which is clearly identifiable with the Prāgbodhi mountain of Hiuen Tsiang, and contains a cave in which Gautama is supposed to have rested before he went to Buddh Gayā. At Gunerī are many Buddhist images and remains, marking the site apparently of the Śrī Guna Charita monastery. The above remains are all in the head-quarters subdivision, in the extreme north of which lie the BARĀBAR HILLS with their famous rock-cut caves. Not far from these hills to the west is the isolated rocky peak of Kowādol, at the base of which is a huge stone image of Buddha; it probably marks the site of the ancient Buddhist monastery of Śilābhadra.

In the Nawāda subdivision at Sītāmarhi, about 7 miles south-west of Hisuā, is a cave hewn in a large isolated boulder of granite. Tradition relates that here Sītā, the wife of Rāma, gave birth to Lava while in exile. Many legends also cluster

round RAJAULI, with its picturesque hills and pretty valleys. At AFSAR are several remains, including a fine statue of the Varāha or Boar incarnation of Vishnu.

In the Jahānābād subdivision, about 3 miles north of the Barābar Hills, stands Dharāwat, near the site of another Buddhist monastery called Gunāmati. South of this, on the slope of a low ridge of hills, many Buddhist remains have been found. At Dāpthu, there are some finely carved images and ruins of temples; and not far from here, lying half-buried in an open field, is a large carved monolith of granite. At Jāru and Banwāria, on the east side of the Phalgu river, are the ruins of what must have been a large temple; and there are other remains of interest at Kāko, Ghenjan, and Ner.

In the Aurangābād subdivision a fine stone temple stands at DEO and a similar one at Umgā. Large Buddhist images and many remains are found at Mānda; and at Bhuiha, 2 miles farther east, are some finely carved *chaityas* and images, and some remains marking the site of a monastery. Deokuli, Cheon, and Pachār also contain remains of Brāhmanical, Buddhist, and Jain interest.

The
people.

The recorded population of the present area rose from 1,947,824 in 1872 to 2,124,682 in 1881 and 2,138,331 in 1891, but fell again to 2,059,933 in 1901. The population is not progressive, and much of the increase between 1872 and 1881 must have been due to better enumeration. The decrease at the Census of 1901 was largely due to the ravages of the plague. The greatest loss took place in the central police circles, where plague was most prevalent; but a slight decadence for which plague was not to blame occurred in the south-west, where the land is high and barren and the crops are scanty and uncertain. The Nawāda subdivision in the east and a small tract which benefits by irrigation from the Son in the north-west added to their population.

The principal statistics of the Census of 1901 are shown in the table on the next page.

Of the towns, GAYĀ, the District head-quarters, TEKARI, and DAUDNAGAR are municipalities. The other chief towns are AURANGĀBĀD, NAWĀDA, and JAHĀNĀBĀD. The density of the population is greatest in the north, rising to 666 persons per square mile in the Jahānābād *thāna*; along the southern boundary, where a considerable area belongs geographically to the Chotā Nāgpur plateau, it is very sparse, and in the Bārāchati *thāna* there are only 257 persons per square mile. Gayā sends out numerous emigrants to the adjoining Districts

of Hazāribāgh and Palāmau, but the most marked feature connected with migration is the great number of natives of the District who earn a livelihood in distant parts. No less than 58,952, or 2·8 per cent. of the population, were residing in Bengal proper at the time of the Census of 1901, and of these 36,953 were enumerated in Calcutta. These emigrants are employed chiefly as *darwāns*, peons, and weavers in jute-mills; and they remit a large portion of their earnings for the support of their families, whom they seldom take with them. It was estimated in 1893 that as much as Rs. 8,40,000 was thus remitted annually to the District. The vernacular of Gayā is the Magahī dialect of Bihārī; the Awadhī dialect of Eastern Hindī is spoken by Muhammadans. Of the total population, 1,840,382 persons (89·3 per cent.) are Hindus and 219,124 (10·64 per cent.) Muhammadans.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Gayā . . .	1,905	3	2,999	751,855	395	- 9·7	26,638
Nawāda . .	955	2	1,752	453,868	475	+ 3·2	15,166
Aurangābād .	1,246	2	2,042	467,675	375	- 1·0	16,695
Jahānābād .	606	1	1,078	386,535	638	- 1·8	16,264
● District total	4,712	8	7,871	2,059,933	437	- 3·7	74,763

The Goālās (306,000) are the most numerous Hindu caste, next to whom come Bābhans (163,000) and Koiris (145,000). There are several aboriginal or semi-Hinduized tribes, the principal being Bhuiyās (112,000), Dosādhs (108,000), Musahars (55,000), and Rajwārs (53,000). The most common higher castes are Brāhmans (64,000), Rājputs (111,000), and Kāyasths (39,000). The Brāhmans include a number of persons who, though not regular or orthodox Brāhmans, are allowed a kind of brevet rank; among these the most remarkable are the Gayāwāls (*see* GAYĀ TOWN) and the Dhāmins. Many of the functional castes are well represented, such as Kahārs (110,000), Chamārs (81,000), Telis (58,000), Kurmīs (41,000), Barhais (39,000), and Hajjāms and Pāsīs (38,000 each). Among Muhammadans, Jolāhās (74,000) are the most numerous. Agriculture supports 65·1 per cent. of the population, industries 14 per cent., commerce 0·6 per cent., and the professions 1·9 per cent.

Christians number only 253, of whom 40 are natives; the

Christian
missions.

missions at work are the London Baptist Missionary Society, the London Baptist Zanāna Missionary Society, and the World's Faith Missionary Association.

General
agricul-
tural con-
ditions.

The northern portion of the District, extending southwards to about 10 miles beyond Gayā town and constituting about two-thirds of the whole area, is fairly level and is mostly under cultivation. Farther south the rise towards the hills of Chotā Nāgpur is more rapid, the country is intersected with hills and ravines, the proportion of sand in the soil is much higher, and a large area is composed of hill and scrub-covered jungle, which extends for several miles below the hills. Cultivation in this tract is far more scanty; but in recent years large areas of waste have been reclaimed, and the process will probably be accelerated with the opening of new lines of railway and the general improvement of communications. Between the numerous rivers the land is higher; in the south these *doābs* can be irrigated only with difficulty, and *rabi* and *bhadoi* crops are most grown. Farther north, where the surface is more level, most of them can be watered by channels from the rivers and from *āhars*, and rice is largely grown. In the west near the Son a considerable area, which was formerly sandy and infertile, is irrigated from the Patna Canal and its distributaries. In the northern tract the soil is generally alluvial, consisting chiefly of clay with a small proportion of sand. In the south, however, sand generally predominates. In some parts the soil is impregnated with carbonate of soda.

Chief agri-
cultural
statistics
and principal
crops.

The chief agricultural statistics for 1903-4 are given below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Irrigated.*
Gayā . . .	1,905	1,049	92	...
Nawāda . .	955	498	37	...
Aurangābād .	1,246	657	98	52
Jahānābād .	606	508	20	33
Total	4,712	2,712	247	85

* This column represents the area irrigated from Government canals. Statistics showing the area irrigated from private channels, tanks, wells, &c., are not available; but it is estimated that in the whole District the area irrigated from all sources is 75 per cent. of the total cultivated area.

The area twice cropped is estimated at 287 square miles. The most important staple is rice, grown on 1,382 square miles or about 51 per cent. of the cultivated area. Besides this, a great variety of crops are raised; and it is not unusual to find four crops—such as gram, wheat, sesamum, and linseed

—grown together in the same field; to this fact and to the protection afforded by the Son Canals and the indigenous system of irrigation followed in the District may be ascribed the comparative immunity it enjoys from famine. Wheat covers about 249 square miles; and the other important cereals and pulses are gram, *maruā*, maize, barley, *khesāri*, *masūr*, peas, *urd*, and *mūng*. *Bājra* and *jowār* are cultivated to a large extent on high lands. Oilseeds cover 329 square miles, the chief crop being linseed, grown on 160 square miles. Gayā is one of the chief opium-producing Districts in Bengal, and 75 square miles are devoted to the cultivation of the poppy. Sugar-cane is widely grown, as also are potatoes, yams and other vegetables, and *pān* or betel-leaf.

During the ten years ending 1901-2, 2·83 lakhs was advanced under the Land Improvement Loans Act and Rs. 67,000 under the Agriculturists' Loans Act; the loans are chiefly used for the improvement or extension of the means of irrigation.

The local cattle are small but sturdy. Extensive pasture Cattle. lands exist in the thinly cultivated tracts in the south, but elsewhere the cattle are largely fed on chopped straw. Sheep are reared extensively by the Gareri caste, especially near the hills, where grazing is plentiful; and their wool is used in the manufacture of carpets, rugs, and blankets. Goats are common, and pigs are kept by Bhuiyās, Musahars, Dosādh, and Doms. A veterinary dispensary is maintained at Gayā by the District board. Numerous religious gatherings are held at various places in the District, especially in Gayā town, which is a place of pilgrimage throughout the year; to some of these cattle and ponies are brought for sale, but no special fair is held for the sale of cattle.

Agricultural prosperity depends almost entirely on irrigation. Irrigation. It is supplied in the west by two branches of the SON CANALS system. The Eastern Main Canal, which was originally intended to pass across Gayā into Monghyr, runs eastward for 8 miles to the Pūnpūn river, and the Patna Canal runs northwards for 43 miles before entering Patna District. One-fifth of the District is thus irrigated, the area actually supplied with water from these canals and their distributaries in 1903-4 being 85 square miles. The remainder is cut into parallel strips by a number of rivers which flow from south to north. Between each pair of rivers is necessarily a watershed, and in the slope leading from it to the river reservoirs are constructed. These are filled either by the rain-water which comes down the slope, this system being known as *genrābandī*, or from

a water channel (*ḥaiṇ*) which passes along the side, and takes off from the river at a higher level. As the rivers fall only 6 feet in the mile, the channels are sometimes carried to a considerable distance, and Dr. Grierson writes of having seen one 20 miles long. Whenever a flood comes down, during the rainy season, it fills all the reservoirs (*āhars*) attached to each channel. Well-irrigation is largely resorted to in the neighbourhood of villages, where less expensive methods are not practicable. Though no accurate statistics are available, it is believed that about 156 square miles are irrigated from wells.

Minerals.

The principal mineral product is mica, which is found at Sapahī, Singar, Basron, Chatkari, and Belam in the Nawāda subdivision, and in smaller quantities among the hills in the south on the border of Hazāribāgh. The seams are reached by blasting; and the sheets of mica are then dug out, separated, clipped, and sorted and packed according to size, and dispatched to Calcutta for export to America and Europe. In 1903 the only mines worked regularly were those at Sapahī, Basron, Singar, and Belam. The average number of labourers employed was 464; they are drawn from the ordinary labouring classes, and are paid a daily wage varying from 2 to 6 annas, according to age, sex, and skill. The output, which varies according to the demand in the market, amounted in 1903 to 122 tons. Iron ore is found in considerable quantities at Pachambā in the Nawāda subdivision and at Lodhwe in the head-quarters subdivision, but is not now worked. It also exists in the Barābar Hills, where there were formerly smelting works under European management; it is now being worked again to a small extent. Granite, syenite, and laterite are quarried in many of the hills for building purposes and road-metalling. The so-called Gayā black stone, of which ornaments, bowls, and figures are carved, is quarried at Pathalkatti in the Atri *thāna*, and worked chiefly by stone-carvers who claim to be of Brāhman descent and to have come from Jaipur. Pottery clay exists in many places, and nodules of limestone are found in scattered localities. Saltpetre is manufactured, chiefly in the Jahānābād subdivision, from efflorescences on the clay of village sites.

Arts and manufactures.

The manufactures include lac, sugar, *tasar* and cotton cloth, brass utensils, stoneware, gold and silver ornaments, blankets, rugs and carpets. Paper was formerly made on a large scale at Arwal, but the industry has entirely died out. Silk cloth is woven to a considerable extent at Mānpur near Gayā, and

in a smaller degree at Kādirganj in the Nawāda subdivision and Daudnagar. Carpets and rugs are manufactured at Obrā and Daudnagar. Brass utensils are also made in large quantities at the latter town. Carving in wood was formerly an important industry, and the carvers had attained much proficiency, as is evident from some examples still existing in the balconies, doors, and windows of Old Gayā; but the art has almost died out. Cane chairs are made at Gayā, but not to any great extent. Small statues of animals and figures of gods are carved by a few artists at Gayā from black stone. Sugar refining is on the wane, but raw sugar is largely manufactured for export. The lac insect is cultivated, generally on the *palās*-tree (*Butea frondosa*) in the southern jungles; and the manufactured product, which is prepared in about forty factories, is exported chiefly to Calcutta. The average annual out-turn is estimated at 50,000 maunds.

The principal exports are food-grains, especially rice, oil-Commerce. seeds, pepper, crude opium, raw sugar, *mahuā* flowers, salt-petre, mica, lac, blankets, carpets, stone and brass utensils, hides, prepared tobacco, and betel-leaves. Among the imports are salt, coal, coke, piece-goods and shawls, kerosene oil, tea, cotton, timber, tobacco (unmanufactured dry leaves), iron, spices of all kinds, dried and fresh fruits, refined sugar, paper, and various articles of European manufacture. The bulk of the trade is with Calcutta, but unrefined sugar finds its way in large quantities to the Central Provinces, Rājputāna, Central India, and Berār. The chief centres of trade are Gayā town, Tekāri, Guruā, Rāniganj, and Imānganj in the head-quarters subdivision; Rajauli and Akbarpur in Nawāda; Jahānābād and Arwal in Jahānābād; and Daudnagar, Deo, Mahārājganj, Tarwā, Khiriāwān, Rafiganj, and Jamhor in the Aurangābād subdivision. Owing to the opening of new railways, which now tap most of the trade routes in the District, several other places are rising in importance, the most noticeable being Nawāda. Feeder-roads have been constructed by the District board, and trade tends more and more to converge upon the railway stations. For the conveyance of produce, bullock-carts are used, but pack-bullocks also are still very largely employed, especially in the hilly parts. The principal classes engaged in trade are the various Baniyā castes and Mārwaris; some Mughals deal in sugar, cloths, and shawls.

The Patna-Gayā branch connects Gayā with the main line Railways. of the East Indian Railway at Bankipore, 34½ miles of it lying within the District. Three other lines have recently been

opened: namely, the South Bihār branch, which runs east from Gayā to Luckeesarai through the Nawāda subdivision, 58 miles falling within the District; the Mughal Sarai-Gayā branch from Gayā through the Aurangābād subdivision to Mughal Sarai, 51 miles lying within Gayā; and the Barun-Daltonganj branch, which leaves the latter line at Barun on the Son and runs for $23\frac{1}{4}$ miles before it enters Pakumau District. A fifth line from Gayā to Katiagarh, of which 34 miles fall within Gayā District, has recently been completed, and, with the Mughal Sarai-Gayā line, forms the grand-chord-line to Calcutta.

Roads. The District is intersected by numerous excellent roads, of which 202 miles are metalled and 719 miles unmetalled, in addition to 628 miles of village tracks. The chief lines are: the grand trunk road, with a length of 51 miles, maintained from Provincial funds; the Kharhat-Rajauli road, running from Bihār to Nawāda and southwards; the Gaya Salimpur road, which is a portion of the Patna-Gayā road, running parallel to the Patna-Gayā Railway; and the Gayā Nawāda road, with several feeder-roads leading from it to the stations on the South Bihār Railway.

Water communications. A small steamer plies weekly on the Patna Canal, but it carries very little merchandise. None of the small rivers is navigable. Most of them, where not bridged, are provided with ferries during the rainy season, but the only large ferries that across the Son from Daudnagar to Nāsriganj in Shahabād District.

Famine. Owing to the construction of the Son Canals, the indigenous system of irrigation which prevails, and the improvement in communications which has taken place since 1874, the District is not seriously affected by famines. The whole of the western border is protected by the Son Canals, and almost all the remainder of the District by the local system of reservoirs and channels described above. A great variety of crops are grown, and it rarely happens that famine obtains a grip over any considerable area. The famine of 1866 affected 1,300 square miles; but the majority of the people were able to support themselves, and the relief operations were on a comparatively small scale, costing only Rs. 22,000, of which Rs. 12,000 was raised by local subscription. In 1874 also the District was not seriously involved; the food-supply was augmented by private trade, and the Government had to supplement it only by a small amount of grain, and by the provision of relief works on the canals. The total expenditure on that

occasion was 1.38 lakhs. Slight scarcities occurred in 1888-9 and 1891-2, while in 1896-7, when severe famine was felt over a large part of India, prices rose very high, and the landless labourers suffered much in consequence. No regular works were opened, but 50,000 persons were gratuitously relieved, most of them being travellers passing through the District in search of labour. The total expenditure was only about Rs. 18,000, all of which was subscribed locally.

For administrative purposes the District is divided into four ^{District subdivisions and staff.} subdivisions, with head-quarters at Sāhibganj (GAYĀ TOWN), NAWĀDA, JAHĀNĀBĀD, and AURANGĀBĀD. The District head-quarters staff subordinate to the Magistrate-Collector consists of three or four Deputy-Magistrate-Collectors, besides two special Deputy-Collectors for excise and partition work. A Joint-Magistrate is usually deputed to Gayā for the cold-season months, and one or two Sub-Deputy-Collectors and an Assistant Magistrate-Collector are also occasionally posted to the District. The Nawāda, Jahānābād, and Aurangābād subdivisions are in charge of Deputy-Magistrate-Collectors, and sometimes, in the case of the two subdivisions first named, of Assistant Magistrates.

The civil courts are those of the District and Sessions ^{Civil and criminal justice.} Judge, two Sub-Judges, and four Munsifs, one of whom sits at Aurangābād. The criminal courts include those of the District and Sessions Judge, the District Magistrate, and the above-mentioned Joint, Assistant, and Deputy-Magistrates. A special magistrate is authorized under section 14 of the Criminal Procedure Code to try cases connected with breaches of the Irrigation laws. The District was formerly notorious for the prevalence of crime, especially in the south, which was in a lawless state, dacoities and highway robberies being frequent. Now, though dacoities are occasionally committed, the commonest offences are burglary, cattle-stealing, and riots caused by disputes about irrigation.

Owing to changes in the jurisdiction of the District and ^{Land revenue.} the destruction of records at the time of the Mutiny, early statistics of the land revenue are not available. The current demand has risen from 13.8 lakhs in 1870-1 to 14.39 lakhs in 1903-4. Subdivision of estates has gone on rapidly, there being in the latter year 7,876 estates, of which 7,828 with a demand of 13.40 lakhs were permanently settled, 15 with a demand of Rs. 47,000 temporarily settled, and the remainder were held direct by Government. Among special tenures may be mentioned *altamghā* grants, or lands given in per-

petuity as a reward for conspicuous military service ; *ghāt-wāli* lands, assigned for the maintenance of guards and patrols on roads and passes ; and *madatmāsh*, lands granted to favourites and others. About 70 per cent. of the cultivated land is held under the system of *bhaoli* or produce rents. There are two kinds : *dānābandi*, where the crop is appraised while standing in the field ; and *batai* or *agorbatai*, where the crop is taken to the threshing-floor and divided equally between the landlord and tenant after the labourers engaged in cutting and carrying it have been given their share. Under the *dānābandi* system also the crop is supposed to be divided equally, but in practice the landlord's share is generally $\frac{1}{6}$ ths and often even more. In the case of cash rents three kinds of tenure obtain : namely, the ordinary *nagāi*, *shikmī*, and *chakath*. A *shikmī* tenure in this District means a tenure held on a cash rent fixed for ever. A *chakath* holding is one in which the rent is fixed for a term of years ; the term is also often applied to settlements made for the reclamation of cultivable waste. Another local tenure is the *paran* or *paranpheri*, under which rice land held on the *bhaoli* system and suited to the growth of sugar-cane or poppy is settled at a specially high rate of rent in the years when these crops are grown. The following rates of rent per acre may be regarded as fairly general : rice land, if fit for only a single crop, Rs. 1-8 to Rs. 8, and if yielding a double crop, Rs. 3 to Rs. 10 ; land on which wheat, barley, gram, pulses, and oilseeds are grown, Rs. 2 to Rs. 8 ; sugar-cane and poppy land, Rs. 3 to Rs. 16 ; land growing *bhādoi* crops such as maize, *maruā*, or *jowār*, Rs. 1-8 to Rs. 5 ; and land growing potatoes, Rs. 4 to Rs. 16. The Government estates in the District and part of the Tekāri estate with a total area of 582 square miles were cadastrally surveyed and settled between 1893 and 1898. The incidence of land revenue was found to be R. 0-10-5 per acre and the rent Rs. 4-0-10, the land revenue demand thus amounting to only 16 per cent. of the rent. Over the whole District the maximum and minimum rent rates per acre are about Rs. 16 and 8 annas respectively, the average being Rs. 5-12. The average holding of a ryot is about 6 acres. Recently the Deo and Maksudpur estates, with an area of 92 and 132 square miles respectively, have also come under survey and settlement.

The table on the next page shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees.

Outside the municipalities of GAYĀ, TEKĀRI, and DAUD-

NAGAR, local affairs are managed by the District board, Local and with subordinate local boards in each subdivision except the head-quarters subdivision. In 1903-4 its income was Rs. 3,26,000, of which Rs. 2,26,000 was derived from rates; and the expenditure was Rs. 3,07,000, including Rs. 2,04,000 spent on public works and Rs. 45,000 on education. Local and municipal government.

	1880-1.	1890-1.	1900-1.	1903-4
Land revenue . . .	14,35	14,67	14,69	14,34
Total revenue . . .	24,91	24,82	28,52	30,08

In 1903 the District contained 14 police stations and 22 outposts; and the force subordinate to the District Superintendent consisted of 5 inspectors, 49 sub-inspectors, 56 head constables, and 659 constables. The rural police consisted of 389 *daffadārs* and 3,648 *chaukidārs*. The District jail at Gayā town has accommodation for 542 prisoners, and subsidiary jails at Nawāda, Jahānābād, and Aurangābād for 105. Police and jails.

Gayā District is backward in point of education, and only 3.6 per cent. of the population (7.2 males and 0.2 females) could read and write in 1891. The number of pupils in the schools increased from 19,118 in 1880-1 to 26,250 in 1892-3 and 26,849 in 1900-1. In 1903-4 37,824 boys and 2,303 girls were at school, being respectively 24.9 and 1.4 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,598: namely, 19 secondary, 979 primary, and 600 special schools. The expenditure on education was Rs. 1,49,000, of which Rs. 14,000 was met from Provincial funds, Rs. 45,000 from District funds, Rs. 3,000 from municipal funds, and Rs. 51,000 from fees. The chief institutions are the Government school and two private schools at Gayā town, and a school maintained by the Tekāri Rāj at Tekāri, all teaching English up to the matriculation standard. Education.

In 1903 the District contained 15 dispensaries, of which 10 had accommodation for 182 in-patients. The cases of 90,000 out-patients and 2,300 in-patients were treated, and 7,000 operations were performed. The expenditure was Rs. 67,000, of which Rs. 3,000 was met by Government contributions, Rs. 22,000 from Local and Rs. 7,000 from municipal funds, and Rs. 25,000 from subscriptions. The chief institutions are the pilgrim and *zanāna* hospitals at Gayā town. Medical.

Vaccination is compulsory only in municipal areas, but the

Vaccination.

practice is steadily gaining ground, and the people as a whole are beginning to realize its efficacy. In 1903-4 the number of persons successfully vaccinated was 58,000, or 29·5 per 1,000.

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. 1 (1838); G. A. Grierson, *Notes on the District of Gayā* (Calcutta, 1893); L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1906).]

Gayā Subdivision.—Head-quarters subdivision of Gayā District, Bengal, lying between $24^{\circ} 17'$ and $25^{\circ} 5' N.$ and $84^{\circ} 17'$ and $85^{\circ} 24' E.$, with an area of 1,905 square miles. The population in 1901 was 751,855, compared with 832,442 in 1891. A plague epidemic was raging at the time of the Census of 1901, which not only caused many deaths and a considerable exodus, but also made the work of enumeration exceptionally difficult. The subdivision comprises two tracts, that to the north being a level plain dotted with isolated hills and containing some long hill ranges, that to the south being an undulating country with several hills forming the northern fringe of the Chotā Nāgpur plateau. The density for the whole subdivision is only 395 persons per square mile, and the population along the south is very sparse. It contains three towns, GAYĀ (population, 71,288), the head-quarters, TEKĀRI (6,437), the residence of the Tekāri family (*see* TEKĀRI RĀJ), and SHERGHĀTĪ (2,641); and 2,999 villages. Gayā town, which possesses a very ancient history, is an important place of pilgrimage, and at BUDDH GAYA are remains of unusual religious and archaeological importance. The subdivision contains numerous other remains of great interest, which are referred to in the articles on GAYĀ DISTRICT and BARĀBAR HILLS.

Nawāda Subdivision.—Eastern subdivision of Gayā District, Bengal, lying between $24^{\circ} 31'$ and $25^{\circ} 7' N.$ and $85^{\circ} 17'$ and $86^{\circ} 3' E.$, with an area of 955 square miles. The population in 1901 was 453,868, compared with 439,565 in 1891. The north of the subdivision is an alluvial plain, while the south is hilly and covered with jungle. The latter tract, which includes a portion of the northern fringe of the Chotā Nāgpur plateau, is very sparsely populated; the density for the whole subdivision is 475 persons per square mile. It contains two towns, NAWĀDA (population, 5,908), the head-quarters, and HIRUĀ (6,704); and 1,752 villages. At ARSAR are some important archaeological remains, including a fine statue of the Varāha or Boar incarnation of Vishnu, and the ruins of a temple.

Aurangābād Subdivision.—Western subdivision of Gayā District, Bengal, lying between $24^{\circ} 29'$ and $25^{\circ} 7'$ N. and $84^{\circ} 0'$ and $84^{\circ} 44'$ E., with an area of 1,246 square miles. The north of the subdivision is a level alluvial tract, but the south is more undulating and contains numerous hills, the outliers of the Chotā Nāgpur plateau. The population in 1901 was 467,675, compared with 472,507 in 1891. The density is 375 persons per square mile, being highest in the north-west where the soil is irrigated by the Son Canals system. It contains two towns, AURANGĀBĀD (population, 4,685), the head-quarters, and DAUDNAGAR (9,744); and 2,042 villages. DEO, the seat of the Deo family, contains a fine stone-built temple; some other interesting antiquities are referred to in the article on GAYĀ DISTRICT.

Jahānābād Subdivision.—Northern subdivision of Gayā District, Bengal, lying between $24^{\circ} 59'$ and $25^{\circ} 19'$ N. and $84^{\circ} 27'$ and $85^{\circ} 13'$ E., with an area of 606 square miles. The population in 1901 was 386,535, compared with 393,817 in 1891; and, with 638 persons per square mile, it is more densely populated than the rest of the District. The country is alluvial, well cultivated, and intersected by several rivers; and the surface is generally level. It contains one town, JAHĀNĀBĀD (population, 7,018), the head-quarters; and 1,078 villages. It possesses several remains of archaeological interest, which are referred to in the article on GAYĀ DISTRICT.

Tekāri Rāj.—Estate in Gayā District, Bengal. The Tekāri Rāj was founded by a small landed proprietor, a Bābhan, named Dhīr Singh, at the beginning of the eighteenth century. His son, Sundar Singh, took advantage of the confusion created by the invasion of Nādir Shāh in 1739 to lay hands on all property within his reach that he was strong enough to keep. The title of Rājā was conferred on him by Muhammad Shāh, emperor of Delhi, as a reward for the assistance he rendered to Alī Vardī Khān, *Sūbahdār* of Bengal and Bihār, in resisting an invasion of the Marāthās. His adopted son Buniād succeeded him, but was treacherously drowned by Mīr Kāsim in 1762 in revenge for his allegiance to the British. At the time Buniād's son, Mitrājīt, who was only a few months old, was with difficulty saved from Mīr Kāsim's emissaries. After Mīr Kāsim's defeat at the battle of Buxar, Mitrājīt was made over by Dalīl Singh, his father's *diwān*, in whose charge the boy had been placed, to the British commanding officer. He was subsequently restored to his estates and became a stanch friend to the British, assisted in quelling the Kolhān

rebellion, and was honoured with the title of Mahārājā. He died in 1840, when the Rāj was divided between his two sons, the elder, Hit Nārāyan, getting a 9 annas share, and the younger, Mod Nārāyan, 7 annas.

Five years later Hit Nārāyan received the title of Mahārājā; but being a man of religious turn of mind, he became an ascetic and left his vast property in the hands of his wife, Mahārānī Indrājīt Kunwar, who with her husband's consent adopted Mahārājā Rām Nārāyan Krishna Singh as her son, and on her death left the property to his widow, Mahārānī Rājrup Kunwar. The latter appointed as her successor her daughter, Rādheshwarī Kunwar, who died in 1886, leaving a minor son, Mahārāj Kumār Gopāl Saran Nārāyan Singh. The 9 annas share of the Tekārī estate was brought under the management of the Court of Wards on his behalf, and remained under its charge till 1904. During this period, much has been done for the development of the resources of the property. As many as eighteen irrigation systems have been taken in hand, which have resulted in an increase to the rent-roll of over half a lakh of rupees. The two most important of these are the Jāru canal and Jamu *pain* in the Chākand *mahāl*. The former added Rs. 20,000 to the rent-roll, while the expenditure incurred was only Rs. 5,000; and by the improvement of the latter, at a trifling expenditure, the income of the *mahāl* was increased by Rs. 10,000 per annum. This portion of the estate was brought under settlement between the years 1893 and 1898, when it was found to contain 551 villages with a total area of 309 square miles. More than two thirds of it is under cultivation, and nearly half of the cultivated area is irrigated; the chief crop is winter rice. Closely connected with the fact that irrigation is required over large tracts, and that the necessary works can be constructed and maintained only at the landlord's expense, is the prevalence of the *bhuoli* system of produce rents (*see* GAYĀ DISTRICT), which alone can furnish the necessary incentive to the landlord. About 70 per cent. of the cultivated lands is held on this system; in the rest of the estate the average cash rent per acre is Rs. 4 9 for ryots holding at fixed rates, Rs. 4-6 for occupancy ryots, and Rs. 2-8 for non-occupancy ryots, the average size of the holdings of the three classes of tenants being 4·1 acres, 3·1 acres, and 1·3 acres respectively. The current demand for land revenue and cesses in 1903-4 was 2 lakhs and Rs. 60,000 respectively. The rent-roll is about 7·34 lakhs; but it fluctuates greatly from year to year, owing to so much of the amount being payable in kind.

The 7 annas share of the estate, which, as already stated, was held by Mod Nārāyan Singh, passed on his death to his two widows, who transferred the property in 1870 to a nephew of their late husband, Bābu Rām Bahādur Singh. The latter received the title of Rājā in 1888, but died before being invested with the *khilat* and was succeeded by a granddaughter. On her death six years later, the estate devolved on her daughter, Rāj Kumārī Bhubanesvar Kunwar, who is still in possession of it, though, being a minor, she is under the guardianship of her grandmother. The 7 annas share contains 715 villages, with an area of 523 square miles; the rental is about 6 lakhs.

[*History of the Tekāri Rāj* (Calcutta, 1880); C. J. Stevenson-Moore, *Final Report on the Survey and Settlement Operations in the Tekāri Wards Estate* (Calcutta, 1899).]

Afsar (*Aphsanr*, also called Jafarpur).—Village in the Nawada subdivision of Gayā District, Bengal, situated in 25° 4' N. and 85° 40' E. Population (1901), 1,022. A statue found here of the Varāha or Boar incarnation of Vishnu, apparently of the Gupta period, is of exquisite workmanship and one of the finest in India. A valuable inscription, giving a long genealogy of the later Guptas, now lost, was also discovered at this place. But the most interesting object is the buried temple, the ruins forming a mound sharply conical and nearly 60 feet high. This is one of the earliest Gupta temples; and besides its age, the disposition of its parts, its terraces on terraces, its quaint pillars, pilasters, and niches, and the charming variety in its ornamentation, render it by far the most interesting temple in Bihār. Archaeologically, it is of great interest as a Hindu relic of a period of which Brāhmanical remains are few. Architecturally, it is second in importance only to the Buddh Gayā temple.

[J. F. Fleet, *Inscriptions of the Early Gupta Kings and their Successors* (Calcutta, 1888).]

Aurangābād Town.—Head-quarters of the subdivision of the same name in Gayā District, Bengal, situated in 24° 45' N. and 84° 23' E., on the grand trunk road. Population (1901), 4,685. The town contains the usual public offices; the sub-jail has accommodation for 15 prisoners. The trade consists chiefly of food-grains, oilseeds, leather, and piece-goods.

Barābar Hills.—Hill range on the northern boundary of the head-quarters subdivision of Gayā District, Bengal, lying between 25° 0' and 25° 3' N. and 85° 1' and 85° 5' E., from 6 to 8 miles east of Belā railway station on the Patna-Gayā

branch of the East Indian Railway. The range contains many remarkable antiquarian remains. On the highest peak (Barābar) is an ancient temple sacred to Sidheswara, containing a *lingam* said to have been placed there by Bāna Rājā, the Asura king of Kāmāruṇya, whose bloody wars with Krishna still live in the remembrance of the people. A large fair, attended on an average by 15,000 persons, chiefly men, is held here in the month of Bhādra (September). The pilgrims begin to arrive at daybreak, and spend the day on the hill; the night is devoted to the worship of the image, and in the morning the crowd begins to disperse. To the south and near the base of this hill, the path up which is freely adorned with images of all kinds, lies a small recess enclosed on two sides by the mountain, on the third by an artificial barrier of stone, and on the fourth by a long low ridge of granite. Here in the solid rock have been cut the remarkable caves from which, it has been held, the glen derives its name of Sātghar ('seven houses'). The four caves found in this part of the mountain average 32 feet by 14 feet; three of them are chiselled to a wonderful polish, but the fourth was never finished. Inscriptions show that the oldest was cut in 252 B.C., and the others within the next thirty-six years; these are on another spur of the hill called Nagarjoni. Not far off is the sacred spring of Patalgangā, and at the base of the rugged peak of Kowādol ('crow's rocking stone') is an enormous figure of Buddha. The Kowādol peak is identified as the site of the ancient Buddhist monastery of Silābhadrā visited by Hiuen Tsiang. Many other figures and sculptures are found among these hills, which have been fully described by Buchanan-Hamilton and General Cunningham. In the *Bengal Atlas* of Major Rennell, this cluster is called the Currumshaw hills; this name is a corruption of *Karnā-champar* or 'Karna's seat,' the name of an ancient ruin on the hill.

Buddh Gayā (*Bodhi Gayā*).—Village in the head quarters subdivision of Gayā District, Bengal, situated in 24° 42' N. and 85° 0' E., about 7 miles south of Gayā town, on the west bank of the Phalgu or Lilājān river. Population (1901), 502. The name signifies either the Gayā of Buddha or the Gayā of the *bodhi* ('enlightenment'). The place is sometimes, however, called Mahābodhi, or 'the great enlightenment,' a name which is also given to the *bodhi-druma* or sacred *pīpal*-tree at Buddh Gayā.

It was under this tree that Sākyamuni, after many years of search after truth, conquered Māra and attained to Buddha-

hood, i.e. became freed from the circle of rebirths; and worship consequently centred around the *bodhi*-tree from the earliest period of Buddhism. King Asoka (third century B.C.) is said to have erected a temple near this holy tree, and one of the bas-reliefs of the Bhārhut *stūpa* (second century B.C.) gives a representation of the tree and its surroundings as they then were. It shows a *pīpal*-tree, with a *vedi* or stone platform in front, adorned with umbrellas and garlands, and surrounded by some building with arched windows resting on pillars; while close to it stood a single pillar with a Persepolitan capital crowned with the figure of an elephant. When the stone pavement of the present temple was dug up during its restoration, foundations of an older building were discovered beneath it, which, in the opinion of General Cunningham, represent the remains of the original temple built by Asoka. The ancient stone railing which now surrounds the temple certainly belongs for the greater part to about the same time as Asoka's reign; and this railing and the bases of some columns which mark the place where Buddha used to take exercise form the only remains now extant of so early a period. The railing is adorned with various sculptures, among which the larger reliefs generally represent events in Buddha's life or in his former births. On one of these pillars, which has been removed from the temple precincts to the *math* of the *mahant* of Buddh Gayā, there is a figure of the Sun-god standing on his chariot drawn by four horses. The holy tree stands west of the temple. The present one is certainly not of very great age, but it is evidently an offshoot of an older tree; and General Cunningham even found portions of the trunk and roots of a *pīpal*-tree very deep down below the surface. Under its shadow is the ancient *Vajrāsana* or adamant throne of Buddha, which may belong to about the same time as the railing, though it contains a mutilated inscription of later date. Its outer faces are covered with Brāhmani geese, alternating with the usual honeysuckle ornament; and its upper surface has a geometrical pattern carved upon it. Except for these earlier remains, all the Buddhist sculptures, which have been found in great numbers around the temple, belong to the latest phase of Buddhism in India (A.D. 800 to 1200), and afford a striking illustration of what that religion had become before its final overthrow by the Muhammadans.

The present temple was restored in 1881 by the Bengal Government, and in its main features represents the structure as it must have existed as early as A.D. 635, when the Chinese

pilgrim, Hiuen Tsiang, saw it. It consists of a main tower rising to the height of 180 feet in the form of a slender pyramid, which springs from a square platform on the four corners of which are similar towers of smaller size. The outside walls have niches for the reception of statues, and access to the temple is obtained through an eastern gate supported by pillars, which opens on to an anteroom in front of the sanctum. At the western wall of the sanctuary is a *vedi* or altar upon which is placed the principal image, a large mediaeval statue representing Buddha seated under the *bodhi*-tree with various other images on each side. The main figure has been gilded over, and the Hindu custodians of the shrine have marked its forehead with the sectarian mark of the Vaishnavas, in order to represent it as the Buddha incarnation of Vishnu. The worship of this image by Hindus is comparatively recent, and apparently does not date farther back than the restoration of the temple in 1881.

The ground floor is about 20 feet below the modern surface level. Scarcely more than one quarter of the old site has been excavated; but, as far as can be judged from the present state of the ruins, the entire area of the main enclosure of the temple has been laid open. It was filled with an enormous amount of smaller shrines, *chaityas*, votive *stūpas*, and the like, the foundations of which are still extant. South of the temple is an old tank, called Buddhpokhar; and north-west, at a place now called Amar Singh's Fort, remains of the ancient monastery of Buddh Gayā have been discovered. Very little of these remains can, however, be seen at present, and here as in other places further excavation on a systematic scale may yield valuable results.

Apart from the temple and its surroundings, the remains near Buddh Gayā are scanty. There are none to be found at the spot where, according to tradition, Buddha was sheltered by the serpent-king Muchilinsa, and where Hiuen Tsiang saw a statue representing the scene; but at Bakraur, where some of the pillars of the Buddh Gayā railing have been placed inside a small Hindu *math*, are the remains of a *stupa* which marked the site where Buddha once appeared in the shape of an elephant. The so-called Prāgbodhi cave, where Buddha spent some time before he went down to Uruvilvā, the present Buddh Gayā, is situated on the western slope of the Mora hills, midway between Buddh Gayā and Gayā town; and the brick foundations of ancient *stūpas* may be observed from the cave on the hills.

Buddh Gayā is now a place of Hindu as well as of Buddhist worship; and the Hindu pilgrims who offer *pindas* to their ancestors at the holy shrines of Gayā visit it on the fourth day of their pilgrimage and perform the usual propitiatory ceremonies, the principal *vedi* being another *pīpal*-tree north of the temple. It cannot now be determined to what age this adoption by the Hindus of a Buddhist site goes back, but it is certainly several centuries old; and it is not improbable that Hindu worship at the place began before the final overthrow of Buddhism, during the syncretistic period which preceded that event.

[L. S. S. O'Malley, *District Gazetteer of Gayā* (Calcutta, 1906); Sir A. Cunningham, *Mahābodhi* (1892); Dr. Rājendralāla Mitra, *Buddh Gayā* (Calcutta, 1878).]

Daudnagar.—Town in the Aurangābād subdivision of Gayā District, Bengal, situated in 25° 3' N. and 84° 24' E., on the right bank of the Son river and the left bank of the Patna Canal. Population (1901), 9,744. It is said to have been founded by Daud Khān, a *risāldār* of Aurangzeb, and its chief building is a *sarai* or resthouse built by him. It is surrounded by a moat, and formerly had gates which used to be shut every night. Its trade was once very considerable, and *tasar* cloth was manufactured in large quantities. Its prosperity is on the wane, improved communications having brought the area it used to tap into close proximity to the two main centres, Patna and Gayā; but it has still some trade in *tasar* cloth, brass utensils, blankets, carpets, sesamum, linseed, and molasses. It has also a sugar refinery. It contains the offices of the Assistant Engineer and the Circle officer of the Irrigation department. Daudnagar was constituted a municipality in 1885. The income during the decade ending 1901-2 averaged Rs. 4,400, and the expenditure Rs. 4,200. In 1903-4 the income was Rs. 4,600, mainly from a tax on persons (or property tax); and the expenditure was Rs. 4,500.

Deo.—Village in the Aurangābād subdivision of Gayā District, Bengal, situated in 24° 39' N. and 84° 26' E. It is the seat of the Deo Rājās, one of the most ancient families of Bihār, who trace their descent from the Rānās of Udaipur. In the struggle between Warren Hastings and the Rājā of Benares, the Deo Rājā, although too old to take the field in person, sent his forces to the aid of the British. His successor mustered a contingent against the mutineers at Surgujā, and his grandson rendered good service in quelling the Kol insurrection. The Rājā stood boldly forward for the British during

the Mutiny of 1857. The present Rājā is a minor, and his estate is under the management of the Court of Wards. At Umgā near Madanpur, the original seat of the family, is a fine stone-built temple which an inscription on a slab shows to have been built about 1439. A temple at Deo, which is similar but more ornamental in design, probably dates from the same period, though tradition ascribes to it a fabulous age.

Gayā Town.— Chief town, and, with Sāhibganj, the administrative head-quarters of Gayā District, Bengal, situated in $24^{\circ} 49' \text{ N.}$ and $85^{\circ} 1' \text{ E.}$, on the left bank of the Phalgu river, on branches of the East Indian Railway leading to Patna, Mughal Sarai, Luckeesarai, and Katrasgarh. The town is divided into two adjoining parts: Gayā proper or the old town, and Sāhibganj or the new town. The old town, which contains the famous temple of Vishnupada and other sacred shrines, is chiefly inhabited by the Gayawal priests. The new town (Sāhibganj) is the administrative head quarters of the District, and contains all the public offices, revenue, magisterial, civil, opium, police, &c., the dwelling houses of the European officers and residents, and also the police station and lines, hospitals, circuit and *dāk* bungalows, railway offices, a church, a public library, a school, and a racecourse. The jail building, which was formerly in the midst of the new town, has now been removed to a distance. It has accommodation for 542 prisoners, who are employed on oil-pressing, breaking of road-metal, weaving of *darīs* and *newār*, manufacture of bamboo baskets, money-bags, string and mats, jute twine, and cotton rope. The streets of the old town are narrow, but those of the new town are generally straight and broad with numerous cross-roads. There are many brick houses, often three storeys high. The population, which was 66,843 in 1872, rose to 76,415 in 1881 and 80,383 in 1891, but fell in 1901 to 71,288, the heavy decrease probably being entirely due to the plague which was raging at the time of the Census. Of those enumerated, 54,223, or 76 per cent., were Hindus, and 16,778, or 23 per cent., Musalmāns, while among the others were 156 Christians and 121 Jains. Gāya was constituted a municipality in 1865. The income during the decade ending 1901-2 averaged Rs. 88,000, and the expenditure Rs. 83,000. In 1903-4 the income was Rs. 1,13,000, including Rs. 50,000 derived from a tax on houses and lands, Rs. 23,000 from a conservancy rate, Rs. 9,000 from a tax on vehicles, and Rs. 5,000 as revenue from markets. The incidence of taxation was Rs. 1-2-8 per head of the popula-

tion. In the same year the expenditure amounted to Rs. 1,06,000, the chief items being Rs. 4,000 spent on lighting, Rs. 2,000 on drainage, Rs. 42,000 on conservancy, Rs. 16,000 on medical relief, Rs. 8,000 on roads, and Rs. 2,000 on education. A scheme of water-supply is under consideration, but has been deferred for lack of funds.

According to the Bhāgavat Purāna, Gayā was the name of a king who dwelt in the town in the Tretā-Yuga. The more generally accepted legend, however, is that contained in the Māyā Purāna, according to which Gayā was the name of an Asura, or demon of giant size, who by long and austere penance and devotion obtained the quality of holiness to such an extent that all who saw or touched him were admitted to heaven. Yama, the lord of hell, grew jealous and, pleading that his post was becoming a sinecure, appealed to the gods, who, after conferring in council, visited Gayā and persuaded the demon to grant his pure and holy body as a place of sacrifice. To this Gayā assented, and lay down with his head resting where the old town of Gayā now is. Yama then placed a sacred rock (*dharmasila*) on his head; but this was not sufficient to keep him quiet until Vishnu promised that the rock should be the holiest spot on earth, that the *devas* should rest there, that the locality should be known as *Gayā-kshetra*, and that whoever offered funeral cakes and performed the funeral ceremonies there should be translated with their ancestors to the heaven of Brahmā. This legend, purporting to explain the reason for the peculiar sanctity of the spot which is an object of pilgrimage to every member of the Hindu religion, contains, in the opinion of the late Dr. Rājendralāla Mitra, an allegory of the final victory of Brāhmanism over Buddhism, which had flourished strongly in and around Gayā for many centuries. The pilgrimage to Gayā is undertaken by thousands of Hindus from every part of India. There are forty-five places at which the pilgrims should offer *pindas* or funeral cakes in the *Gayā-kshetra*, an area extending from 5 miles north-west of Gayā town to 7 miles south. The whole forty-five are rarely visited now, the majority of pilgrims contenting themselves with seven and often with three only. The Vishnupada, a temple built over the footprint of Vishnu on the solid rock that crops up on the west bank of the Phalgu river, and round which the old town of Gayā proper was built, may be regarded as the centre of this pilgrimage, and is the largest and most important temple in Gayā. It faces east, the façade being very striking. It is an ugly octagonal

building about 100 feet high, with many very clumsy mouldings. The threshold is guarded by high folding doors plated with silver. In the centre is an octagonal basin plated with silver, which surrounds the impress on the rock of the god's foot about 16 inches in length. Pilgrims to the temple stand round the basin and throw in their offerings of rice and water. To the south of the temple, almost touching it, is a handsome pillared hall or porch, where the bare rock shows itself; in fact the pillars are let into the solid rock for a foundation. This temple is said to have been erected in the eighteenth century by Ahalyā Bai, widow of Holkar of Indore, on the site of a more ancient temple. The Gayāwāls are the hereditary officiating priests, possessing the exclusive privilege to grant to the pilgrims the blessing without which their visit would be ineffectual, and they take advantage of their position to obtain from the pilgrims such gifts as they are able to afford. The poorest pilgrim can rarely get through the functions required of him under five rupees, while certain princes are reputed to have spent more than a lakh.

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. i (1838); L. S. S. O'Malley, *District Gazetteer of Gayā* (Calcutta, 1906).]

Hisuā.—Town in the Nawāda subdivision of Gayā District, Bengal, situated in 24° 50' N. and 85° 25' E., on the right bank of the Tilayā river on the Gayā and Nawāda road, 9 miles from Nawāda and 27 miles from Gayā town. Population (1901), 6,704. Hisuā has a station (Tilayā) on the South Bihār Railway. The town is noted for its pottery.

Jahānābād Town.—Head-quarters of the subdivision of the same name in Gayā District, Bengal, situated in 25° 13' N. and 85° 0' E., at the confluence of the Morhar (or Dardhā) and Jamunā rivers, on the Patna-Gayā road and on the Patna-Gayā branch of the East Indian Railway. Population (1901), 7,018. It was once famous for its weaving industry, and in 1760 it formed one of the eight minor branches connected with the central factory of the East India Company at Patna. In the early years of the nineteenth century the town contained about 700 houses, a cloth factory, and a native agency for the manufacture of saltpetre. The manufacture of cotton cloth has now been displaced by Manchester goods, but large numbers of the Jolāhā or Muhammadan weaver class still live in the neighbourhood. The trade consists chiefly of food-grains, oilseeds, piece-goods, and fancy articles of European manufacture. The town contains the

usual public offices; the sub-jail has accommodation for 70 prisoners.

Nawāda Town.—Head-quarters of the subdivision of the same name in Gayā District, Bengal, situated in $24^{\circ} 53' N.$ and $85^{\circ} 33' E.$ on both banks of the Khuri river. Population (1901), 5,908. Since the opening of the South Bihār Railway, on which it is a station, Nawāda is growing into an important trade centre. It contains the usual public offices; the sub-jail has accommodation for 20 prisoners.

• **Rajaulī.**—Village in the Nawāda subdivision of Gayā District, Bengal, situated in $24^{\circ} 39' N.$ and $85^{\circ} 30' E.$, on the left bank of the Dhanarjī river. Population (1901), 1,509. Rajaulī is a large mart, and is connected with the towns of Nawāda and Bihār by a metalled road.

Sherghāti.—Town in the head-quarters subdivision of Gayā District, Bengal, situated in $24^{\circ} 33' N.$ and $84^{\circ} 48' E.$, 21 miles south of Gayā town, on the right bank of the Morhar river at the point where it is crossed by the grand trunk road. Population (1901), 2,641. Owing to its position on the grand trunk road, Sherghāti was formerly a place of great importance, and it was the head-quarters of a subdivision which was broken up in 1871. It has since somewhat declined. There are still to be found here the descendants of skilled artisans, workers in brass, wood, and iron. An interesting fort, said to have been built by the Kol Rājās, contains numerous pillars of polished granite, which are probably coeval with the later Barābar caves.

Tekāri Town.—Town in the head-quarters subdivision of Gayā District, Bengal, situated in $24^{\circ} 56' N.$ and $84^{\circ} 50' E.$, on the left bank of the Morhar river, about 16 miles north-west of Gayā town. The population fell from 11,532 in 1891 to 6,437 in 1901, owing to a furious outbreak of plague at the time of the Census and the consequent general exodus of the inhabitants. The town is noted as containing the seat of the TEKĀRI RĀJ. It was constituted a municipality in 1885. The income during the decade ending 1901-2 averaged Rs. 8,800, and the expenditure Rs. 7,700. In 1903-4 the income was Rs. 6,700, mainly from a tax on houses and lands; and the expenditure was Rs. 6,100.

Shāhābād District.—District in the Patna Division of Bengal, lying between $24^{\circ} 31'$ and $25^{\circ} 46' N.$ and $83^{\circ} 19'$ and $84^{\circ} 51' E.$, with an area of 4,373 square miles. It is bounded on the north by the Districts of Ghāzipur and Balliā in the United Provinces and by the Bengal District of Sāran; on

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the east by Patna and Gayā Districts; on the south by Palāmau; and on the west by the Districts of Mirzāpur and Benares in the United Provinces. The Karamnāsā river forms part of the western boundary.

Shāhābād consists of two distinct tracts differing in climate, scenery, and productions. The northern portion, comprising about three-fourths of the whole, presents the ordinary flat appearance common to the valley of the Ganges in the sub-province of Bihār; but it has a barer aspect than the trans-Gangetic Districts of Sāran, Darbhanga, and Muzaffarpur. This tract is entirely under cultivation, and is dotted over with clumps of trees. The south of the District is occupied by the Kaimur Hills, a branch of the great Vindhyan range. The Son and the Ganges may be called the chief rivers of Shāhābād, although neither of them anywhere crosses the boundary. The District lies in the angle formed by the junction of these two rivers, and is watered by several minor streams, all of which rise among the Kaimur Hills and flow northwards towards the Ganges. The most noteworthy of these is the Karamnāsā, the accursed stream of Hindu mythology, which rises on the southern ridge of the Kaimur plateau, and flows north-west, crossing into Mirzāpur District near Kuluhā. After a course of 15 miles in that District, it again touches Shāhābād, which it separates from Benares; finally, it falls into the Ganges near Chausā. The Dhobā or Kao rises on the plateau, and flowing north, forms a fine waterfall and enters the plains at the Tarrachāndi pass, 2 miles south-east of Sasarām. Here it bifurcates—one branch, the Kudra, turning to the west and ultimately joining the Durgauti; while the other, preserving the name of Kao, flows north and falls into the Ganges near Gaighāt. The Durgauti rises on the southern ridge of the plateau and, after flowing north for 9 miles, rushes over a precipice 300 feet high into the deep glen of Kadhar Kho; eventually it joins the Karamnāsā. It contains water all the year round, and during the rains boats of $1\frac{1}{2}$ tons burden can sail up-stream 50 or 60 miles from its mouth. Its chief tributaries are the Surā, Korā, Gonhuā, and Kudra.

Geology. The northern portion of the District is covered with alluvium. The Kaimur Hills in the south are formed of limestones, shales, and red sandstones belonging to the Vindhyan system.

Botany. Near the Ganges the rice-fields have the usual weeds of such localities. Near villages there are often considerable groves of mangoes and palmyras (*Borassus flabellifer*), some date-

palms (*Phoenix sylvestris*), and numerous isolated examples of *Tamarindus* and similar more or less useful species. Farther from the river the country is more diversified, and sometimes a dry scrub jungle is met with, the constituent species of which are shrubs of the order of *Euphorbiaceae*, *Butea* and other leguminous trees, species of *Ficus*, *Schleichera*, *Wendlandia*, and *Gmelina*. The grasses that clothe the drier parts are generally of a coarse character. There are no Government forests; but the northern face of the Kaimur Hills is overgrown with a stunted jungle of various species, while their southern slopes are covered with bamboos.

Large game abounds in the Kaimur Hills. Tigers, bears, Fauna. and leopards are common; five or six kinds of deer are found; and among other animals wild hog, jackals, hyenas, and foxes are also met with.

Owing to its distance from the sea, Shāhābād has greater Climate, extremes of climate than the south and east of Bengal. The temperature varies from 62° in January to 90° in May, tempera- the average maximum rising to 102° in the latter month, ture, and rainfall. Owing to the hot and dry westerly winds which prevail in March and April, the humidity at this season is only 52 per cent. With the approach of the monsoon the humidity steadily increases; it remains steady at 88° throughout July and August, and then falls to 79° in November. The annual rainfall averages 43 inches, of which 5.5 fall in June, 11.7 in July, 12.3 in August, and 6.8 in September.

Floods are occasionally caused by the Son overflowing its Natural banks. In recent times the highest floods occurred in 1876 calamities. and 1901; in the latter year the water rose 1.2 feet above any previously recorded level, and it is stated that the river was at one point 17 miles wide. Owing to the cutting of an embankment at Darāra by some villagers, the flood found its way into Arrah town and caused considerable damage to house property.

Shāhābād was comprised within the ancient kingdom of History. Magadha, whose capital was at Rājgir in Patna District, and its general history is outlined in the articles on MAGADHA and BIHĀR, in which Magadha was eventually merged. It may be added that, when the country relapsed into anarchy on the decline of the Gupta dynasty, Shāhābād came under the sway of a number of petty aboriginal chiefs and had a very small Aryan population. The ruling tribe at this period was the Chero, and the District was till a comparatively recent period in a great degree owned by the Cheros and governed by

their chieftains. They were subsequently conquered by Rājput immigrants, and few of them are now found in Shāhābād, though they still number several thousands in the adjoining District of Palāmau. Under the Muhammadans Shāhābād formed part of the *Sūbah* of Bihār, and in the sixteenth century was the scene of part of the struggles which made Sher Shāh emperor of Delhi. Sher Shāh, after establishing himself at Chunār in the United Provinces, was engaged on the conquest of Bengal. In 1537 Humāyūn advanced against him, and after a siege of six months reduced his fortress of Chunār and marched into Bengal. Sher Shāh then shut himself up in Rohtāsgarh, which he had captured by a stratagem, and made no effort to oppose his advance. Humāyūn spent six months in dissipation in Bengal; but then, finding that Sher Shāh had cut off his communications and that his brother at Delhi would not come to his assistance, he retraced his steps and was defeated at Chausā near Buxar. Buxar is also famous as the scene of the defeat in 1764 by Sir Hector Munro of Mīr Kāsim, in the battle which finally won the Lower Provinces of Bengal for the British. Since then the only event of historical interest is the defence of the Judge's house at ARRAH in the Mutiny of 1857.

Archaeo-
logy.

Among Hindu remains may be mentioned the temple on the MUNDESWARĪ hill dating from the sixth or seventh century. The short reign of Sher Shāh is still borne witness to by one of the finest specimens of Muhammadan sepulchral architecture, his own tomb at SASARĀM, which he originally held as his *jāgīr*. His father's tomb in the same town and the tomb of Bakhtyār Khān, near Chainpur, in the Bhabuā subdivision, are similar but less imposing. The small hill-fort of SHERGARH, 26 miles south-west of Sasarām, dates from Sher Shāh's time, but at ROHTĀSGARH itself few traces of this period remain; the palace at this place is attributed to Mān Singh, Akbar's Hindu general. Other places of interest in Shāhābad are the CHAINPUR fort with several interesting monuments and tombs; Rāmgarh with a fort, and Darauti and Baidyanāth with ruins attributed to the Savaras or Suars; MASĀR, the Mo-ho-so-lo of Hiuen Tsiang; TILOTHU, near which are a fine water-fall and a very ancient Chero image; Patanā, once the capital of a Hindu Rājā of the Suar tribe; and Deo-Barunār and Deo-Mārkanḍeya, villages which contain several old temples and other remains, including an elaborately carved monolith at the former place. The sacred cave of Gupteswar lies in a valley in the Kaimur Hills, 7 or 8 miles from Shergarh.

The population increased from 1,710,471 in 1872 to 1,940,900 in 1881 and 2,060,579 in 1891, but fell again to 1,962,696 in 1901. The increase in the first two decades was largely due to the extension of cultivation, owing to the opening of the irrigation canals. The climate of the northern part of the District is believed to be steadily deteriorating. The surface is so flat and low that there is no outlet for the water which accumulates, while the introduction of the canals is said to have raised the water-level and made the drainage even worse than before. Fever began to make its ravages felt in 1879; and from that time the epidemic grew steadily worse until 1886, when the District was stigmatized as the worst in Bengal in respect of fever mortality.

At the Census of 1891 a decrease was averted only by a large gain from immigration. From 1892 to 1900 the vital statistics showed an excess of deaths over births amounting to 25,000, and in 1894 the death-rate exceeded 53 per 1,000. After fever, the principal diseases are dysentery, diarrhoea, cholera, and small-pox. Blindness is very common. Plague broke out at Arrah just before the Census of 1901. The number of deaths reported was small, but the alarm which the epidemic created sufficed to drive to their homes most of the temporary settlers from other Districts.

The principal statistics of the Census of 1901 are shown in the following table:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Arrah . . .	913	2	1,245	699,956	767	— 5.9	39,253
Buxar . . .	669	2	937	416,704	623	— 5.0	19,309
Sasārām . .	1,490	1	1,906	539,635	362	+ 1.2	16,848
Bhabuā . . .	1,301	1	1,427	306,401	236	— 11.2	8,185
District total	4,373	6	5,515	1,962,696	449	— 4.7	83,595

The principal towns are ARRĀH, the head-quarters, SASĀRĀM, DUMRĀON, and BUXAR. With the exception of Sasārām, all the towns seem to be decadent. The population is densest in the north and east of the District, on the banks of the Ganges and Son, and decreases rapidly towards the south and south-east, where the Kaimur Hills afford but small space for cultivation. The Bhabuā *thāna*, with 181 persons per square mile, has the scantiest population of any tract in South Bihār.

The natives of this District are in demand all over Bengal as *zamīndārs'* peons and club men; they are especially numerous in Purnea, North Bengal, Dacca, and in and near Calcutta, and a large number find their way to Assam. Many also emigrate to the colonies. The vernacular is the Bhojpuri dialect of Bihārī, but the Muhammadans and Kāyasths mostly speak Awadhī Hindī. In 1901 Hindus numbered 1,819,641, or no less than 92·7 per cent. of the total, and Musalmāns 142,213, or nearly 7·3 per cent.; there were 449 Jains and 375 Christians.

Castes and occupations.

The most numerous castes are Ahīrs or Goālās (256,000), Brāhmans and Rājputs (each numbering 207,000), Koiris (155,000), Chamārs (121,000), Dosādhs (87,000), Bābhans (82,000), Kahārs (70,000), Kurmīs (66,000), Kāndus (63,000), and Telis (51,000); and, among Muhammadans, Jolāhās (53,000). Agriculture supports 64·8 per cent. of the population, industries 17·7 per cent., commerce 0·5, and the professions 1·9 per cent.

Christian missions.

The only Christian mission is a branch of the German Evangelical Lutheran Mission, whose head-quarters are at Rānchī. The number of native Christians in 1901 was 72.

General agricultural conditions.

Clay is the predominating soil, but in parts it is more or less mixed with sand. The clay soils, known as *karail*, *keuāl*, *matiyār*, and *gurnat*, are suitable for all kinds of grain, and the level of the land and the possibility of irrigation are here the main factors in determining what crop shall be cultivated. *Doras* is a rich loam containing both clay and sand, and is suited for sugar-cane, poppy, mustard, and linseed. Sandy soil is known as *balmat*, and when it is of very loose texture as *dhus*. The alluvial tract in the north is extensively irrigated by canals and is entirely under cultivation. The low-lying land in the neighbourhood of the Ganges, locally known as *kadai*, is annually inundated so that rice cannot be grown, but it produces fine cold-season crops. Along the west bank of the Son within about 3 miles from the river the soil is sandy, and requires continuous irrigation to produce good crops. To the west of this the prevalent soil south of the grand trunk road is *doras*, which is annually flooded and fertilized by the hill streams. In the Sasarām subdivision *karail* soil is most common and grows excellent *rabi* crops. The undulating plateau of the Kaimur Hills in the south is unprotected by irrigation and yields poor and precarious crops.

Chief agricultural

The chief agricultural statistics for 1903-4 are given in the following table, in square miles :—

statistics
and principal
crops.

Subdivision.	Total.	Cultivated.	Irrigated from canals.
Arrah . . .	913	607	212
Buxar . . .	669	408	167
Sasarām . . .	1,490	480	224
Bhabuā . . .	1,301	505	20
Total	4,373	2,000	623

There are altogether about 311 square miles of cultivable waste, statistics for each subdivision not being available; and it is estimated that 112 square miles are twice cropped.

The staple food-crop of the District is rice, grown on 1,307 square miles, of which 1,112 square miles are under *aghani* or winter rice. This crop is transplanted in June and July (except in very low lands, where it is sometimes sown broadcast), and the water is retained in the rice-fields by ridges till the middle of September, when it is allowed to drain off. The fields are left to dry for 12 to 14 days, after which the crop again needs water, for which it depends on the *hathiyā* rain, or, failing this, on irrigation. These late rains are the most important in the year, as they are required not only to bring the winter crop to maturity, but also to provide moisture for the sowing of the *rabi* crops. *Boro*, or spring rice, is grown in river-beds and on the edge of marshes; it is sown in January and February, transplanted after a month, and cut in April and May. Of the other crops of the rainy season, the principal are maize or *makai*, *maruā*, *jowār*, and *bājra*; these are grown on well-drained high lands. The *rabi* crops consist of cereals and pulses. The chief cereals are wheat (188 square miles), barley (81 square miles), and oats. They are sown in October and November, and harvested between the last week of February and the middle of April. The pulses include peas, gram, and linseed; gram and linseed are grown as a second crop, being sown in the standing *aghani* rice about a fortnight before it is cut. Other important crops are poppy (25 square miles) and sugar-cane (54 square miles).

The opening of the Son Canals has resulted in a considerable increase in the cultivated area. An experimental farm is maintained at Dumraon, but even in the adjoining villages the cultivators are slow to profit by its lessons. Little advantage has been taken of the Land Improvement and Agriculturists' Loans Acts, except in the famine years 1896-8, when Rs. 75,000 was advanced under the latter Act.

The cattle are for the most part poor, but good bulls are Cattle.

kept at the Buxar Central jail, and their offspring find a ready sale. Pasture is scarce except in the Kaimur Hills, where numerous herds are sent to graze during the rains. A large cattle fair is held at Barahpur, at which agricultural stock and produce are exhibited for prizes.

Irrigation. The District is served by the SON CANALS system, receiving about 80 per cent. of the total quantity of water supplied by it. Wells and *āhars*, or reservoirs, are also maintained all over the District for the purposes of irrigation. In 1901 it was estimated that 489 square miles were irrigated from the canals, 364 square miles from wells, and 937 square miles from *āhars*. The extent to which an artificial water-supply is used depends on the variations in the rainfall; in 1903-4 the area irrigated from the Government canals was 623 square miles.

Minerals. Red sandstone from the Kaimur Hills is used extensively for building purposes, for which it is admirably adapted. Limestone, which is obtained from the same locality, is commonly dark grey or blackish, and burns into a very good white lime. *Kankar* or nodular limestone is found in almost all parts of the plains, and especially in the beds of rivers and along the banks of the Son; it is used for metalling roads and is also burnt to make lime. A small quantity of alum was formerly manufactured in the area north of Rohtāsgarh from slates belonging to the Kaimur group of the Vindhyan series. Copperas or iron sulphate is found in the same region.

Arts and manufactures. Sugar is manufactured throughout the District, the principal centres of the industry being Nāsriganj and Jagdispur. Iron sugar-cane mills, manufactured at Bihiyā, are now in general use over a great part of Northern India. Carpets and pottery are made at Sasarām; the speciality of the pottery consists in its being painted with lac and overlaid with mercury and gilt. Blankets and cotton cloth are woven throughout the District. A small quantity of hand-made paper is produced at Hariharganj. Saltpetre is manufactured in small quantities, the out-turn in 1903-4 being 5,000 maunds.

Commerce. The principal imports are rice, gram, and other food-grains from the neighbouring Districts, European cotton piece-goods and kerosene oil from Calcutta, and coal and coke from Hazāribāgh and Palāmau. The exports include wheat, gram, pulses, and oilseeds, chiefly to Calcutta, and raw sugar and *gur* to the United Provinces and elsewhere. The chief centres of trade are Arrah, Dumraon, Buxar, and Chausā on the East Indian Railway, Sasarām and Dehrī on the Mughal Sarai-Gayā branch, and Nāsriganj on the Son. The main lines of com

munication are the railways, the Ganges and Son rivers, and the Son Canals, to which goods are brought by bullock carts and pack-bullocks.

The main line of the East Indian Railway runs for 60 miles from east to west through the north of the District, and the Mughal Sarai-Gayā section opened in 1900 traverses the south. In addition to 58 miles of the grand trunk road from Calcutta to Benares, which passes through Dehrī-on-Son, Sasarām, and Jahānābād, and is maintained from Provincial funds, the District contains 186 miles of metalled and 532 miles of unmetalled roads under the control of the District board; there are also 1,218 miles of village tracks. The principal local roads are those which connect Arrah with Buxar and Sasarām. Feeder roads connect the main roads with the stations on the railway and with the principal places on the rivers. Railways and roads.

The Ganges is navigable throughout the year, and a tri-weekly steamer service for passengers and goods traffic plies as far as Benares, touching at Buxar and Chausā in this District. Navigation on the Son is intermittent and of little commercial importance. In the dry season the small depth of water prevents boats of more than 20 maunds proceeding up-stream, while in the rains the violent floods greatly impede navigation, though boats of 500 or 600 maunds occasionally sail up. Of the other rivers the Karamnāsā, the Dhobā, or Kao, the Durgautī, and the Surā are navigable only during the rainy season. The main canals of the Son Canals system are navigable; a bi-weekly service of steamers runs from Dehrī to Arrah. But here, as elsewhere, most of the water-borne traffic is carried in country boats, some of which have a capacity of as much as 1,000 maunds. The canal-borne traffic used to be considerable, but has suffered greatly from competition with the Mughal Sarai-Gayā branch of the East Indian Railway. The only ferries of any importance are those across the Ganges. Water communications.

The District has frequently suffered from famine. The famine of 1866, having been preceded by two years of bad harvests, caused great distress. The Government relief measures were supplemented by private liberality, but 3,161 deaths from starvation were reported. There was another, but less severe, famine in 1869. In 1873 more than three-fourths of the rice crop was destroyed by very heavy floods and the subsequent complete absence of rain; the loss would have been even greater had not the Son water been turned into the unfinished canals and freely distributed. Relief works, Famine.

in the shape of road repairs, were opened in December, and a sum of 1.18 lakhs was spent in wages, in addition to Rs. 30,000 paid to non-workers, and Rs. 1,600 advanced to cultivators for the purchase of seed-grain. In the famine of 1896-7 the distressed area comprised the whole of the Bhabuā and the southern portion of the Sasarām subdivision. Relief works were started in October, 1896, and were not finally closed till July, 1897, during which period 560,031 days' wages were paid to adult males employed on piece-work, and 175,105 to those on a daily wage, the aggregate payments amounting to Rs. 74,000. Gratuitous relief by means of grain doles was also given, and poorhouses and kitchens were opened. The cost of gratuitous relief was rather less than 2 lakhs, and the total cost of the famine operations was 3.36 lakhs, of which Rs. 30,000 was paid from District and the balance from Provincial funds.

District
subdivi-
sions and
staff.

For administrative purposes the District is divided into four subdivisions, with head-quarters at ARRAH, BUXAR, SASARĀM, and BHABUĀ. Subordinate to the District Magistrate-Collector at Arrah, the District head-quarters, is a staff consisting of an Assistant Magistrate-Collector, six Deputy-Magistrate-Collectors, and two Sub-Deputy-Collectors. The subdivisions of Sasarām and Buxar are each in the charge of an Assistant Collector aided by a Sub-Deputy-Collector, and the Bhabuā subdivision is under a Deputy-Magistrate-Collector. The Executive Engineer of the Arrah division is stationed at Arrah; an Assistant Engineer resides at Koāth and the Executive Engineer of the Buxar division at Buxar.

Civil and
criminal
justice.

The permanent civil judicial staff consists of a District Judge, who is also Sessions Judge, two Subordinate Judges and three Munsifs at Arrah, one Munsif at Sasarām and another at Buxar. For the disposal of criminal work, there are the courts of the Sessions Judge, District Magistrate, and the above-mentioned Assistant, Deputy, and Sub-Deputy-Magistrates. The District was formerly notorious for the number of its dacoits and for the boldness of their depredations; but this crime is no longer common. The crimes now most prevalent are burglary, cattle-theft, and rioting, the last being due to disputes about land and irrigation.

Land
revenue.

During the reign of Akbar, Shāhābād formed a part of *sarkār* Rohtās, lying for the most part between the Son and Karam-nāsā rivers. Half of it, comprising the *zamīndāri* of Bhojpur, was subsequently formed into a separate *sarkār* called Shāhābād. The land revenue demand of these two *sarkārs*, which

was fixed at 10.22 lakhs by Todar Mal in 1582, had risen to 13.66 lakhs at the time of the settlement under Alī Vardī Khān in 1750; but it had again fallen to 10.38 lakhs at the time of the Decennial Settlement, which was concluded in 1790 and declared to be permanent in 1793. The demand gradually rose to 13.55 lakhs in 1843 and 16.72 lakhs in 1862, the increase being due to the revenue survey which took place in 1846. In 1903-4 the total demand was 17.27 lakhs payable by 10,147 estates, of which 9,463 with a demand of 14.98 lakhs were permanently settled, 544 with a demand of 1.38 lakhs were temporarily settled, while the remainder were held direct by Government. The incidence of land revenue is R. 0-13-9 per cultivated acre, being about 22 per cent. of the estimated rental. Rents vary with the class of soil, and for very good land suitable for poppy as much as Rs. 30 per acre is occasionally paid. Rent is generally paid in kind, especially in the Bhabuā and Sasarām subdivisions. The average holding of a ryot is estimated at $5\frac{3}{4}$ acres. The only unusual tenure is the *guzasthā*, which connotes not only a right to hold at a fixed rate in perpetuity but an hereditary and transferable interest in the land. The true *guzasthā* tenure is confined mainly to the Bhojpur *pargana*, but the term is used elsewhere to indicate the existence of occupancy rights.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	17,35	16,74	17,26	17,21
Total revenue . . .	25,00	26,30	28,96	29,57

Outside the municipalities of ARRAH, JAGDĪSPUR, BUXAR, Local and DUMRAON, BHABUĀ, and SASARĀM, local affairs are managed by the District board with subordinate local boards in each subdivision. In 1903-4 its income was Rs. 2,63,000, of which Rs. 2,03,000 was derived from rates; and the expenditure was Rs. 2,89,000, the chief item being Rs. 2,15,000 expended on public works. municipal government.

In 1903 the District contained 11 police stations and 18 Police and outposts. The force subordinate to the District Superintendent in that year consisted of 4 inspectors, 43 sub-inspectors, 46 head constables, and 526 constables; there was also a rural police force of 301 *daffadārs* and 4,254 *chaukidārs*. In addition to the District jail at Arrah with accommodation for jails.

278 prisoners, there is a Central jail at Buxar with accommodation for 1,391, while subsidiary jails at Sasarām, Buxar, and Bhabuā can hold 69. The prisoners in the Central jail are employed chiefly in weaving and tent-making.

Education. Of the population in 1901, 4.3 per cent. (8.6 males and 0.3 females) could read and write. The total number of pupils under instruction fell from 20,883 in 1883-4 to 16,922 in 1892-3, but increased again to 23,032 in 1900-1. In 1903-4, 26,218 boys and 445 girls were at school, being respectively 18.6 and 0.28 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,004: namely, 23 secondary, 623 primary, and 358 special schools. Two small schools for hill tribes are maintained at Rehal and Dahār. The expenditure on education was 1.36 lakhs, of which Rs. 17,000 was paid from Provincial funds, Rs. 40,000 from District funds, Rs. 3,000 from municipal funds, and Rs. 59,000 from fees.

Medical. In 1903 the District contained 12 dispensaries, of which 7 had accommodation for 115 in-patients. The cases of 81,000 out-patients and 2,300 in-patients were treated, and 8,000 operations were performed. The expenditure was Rs. 35,000, of which Rs. 5,000 was derived from Government contributions, Rs. 7,000 from Local and Rs. 10,000 from municipal funds, and Rs. 10,000 from subscriptions.

Vaccination. Vaccination is compulsory only in municipal areas. In 1903-4 the number of persons successfully vaccinated was 48,000, or 25.8 per 1,000 of the population.

[L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1906); M. Martin (Buchanan-Hamilton), *Eastern India*, vol. i (1838).]

Arrah Subdivision.—Head-quarters subdivision of Shāh-ābād District, Bengal, lying between 25° 10' and 25° 46' N. and 84° 17' and 84° 51' E., with an area of 913 square miles. The subdivision is a low-lying alluvial flat, bounded on the north by the Ganges and on the east by the Son. The population in 1901 was 699,956, compared with 743,582 in 1891, the density being 767 persons per square mile. It contains two towns, ARRAH (population, 46,170), the head-quarters, and JAGDĪSPUR (11,451); and 1,245 villages, one of which, BIHIVĀ, on the East Indian Railway, is an important trade centre. Arrah town is famous on account of the gallant defence of the Judge's house by a handful of Europeans and Sikhs against an overwhelming force of mutineers in 1857.

Buxar Subdivision.—North-western subdivision of Shāh-ābād District, Bengal, lying between 25° 16' and 25° 43' N.

and $83^{\circ} 46'$ and $84^{\circ} 22'$ E., with an area of 669 square miles. The subdivision consists of a level plain, entirely under cultivation and extensively irrigated by canals; a strip of land to the north along the Ganges is liable to inundation from the overflow of that river. The population was 416,704 in 1901, compared with 438,739 in 1891, the density being 623 persons per square mile. It contains two towns, BUXAR (population, 13,945), the head-quarters, and DUMRAON (17,236); and 937 villages. Buxar town is famous as the scene of the defeat by Sir Hector Munro of Shujā-ud-daula and Mīr Kāsim in 1764, while at CHAUSĀ, near by, Humāyūn was defeated by Sher Shāh in 1539.

Sasarām Subdivision.—South-eastern subdivision of Shāhābād District, Bengal, lying between $24^{\circ} 31'$ and $25^{\circ} 22'$ N. and $83^{\circ} 30'$ and $84^{\circ} 27'$ E., with an area of 1,490 square miles. The subdivision comprises two distinct tracts, that to the north being an alluvial flat extensively irrigated by canals, while the southern portion is occupied by the Kaimur Hills, an undulating plateau covered with jungle. These hills afford little space for cultivation, and this part of the subdivision suffered severely in the famine of 1896–7. The population in 1901 was 539,635, compared with 533,356 in 1891 the density being 362 persons per square mile. The subdivision contains one town, SASARĀM (population, 23,644), the head-quarters; and 1,906 villages. The head-works of the Son Canals system are at DEHRĪ. There are old forts at SHERGARH and ROHTĀSGARH, and Sasarām and TILOTHU also contain antiquities of interest.

Bhabuā Subdivision.—Western subdivision of Shāhābād District, Bengal, lying between $24^{\circ} 32'$ and $25^{\circ} 25'$ N. and $83^{\circ} 19'$ and $83^{\circ} 54'$ E., with an area of 1,301 square miles. The subdivision consists of two sharply defined portions. To the north there is a flat alluvial plain, and to the south the Kaimur Hills, a tract of jungle, sparsely cultivated and thinly populated. The population in 1901 was 306,401, compared with 344,902 in 1891, the density being 236 persons per square mile. The Kaimur Hills afford little space for cultivation, and the Bhabuā *thāna*, with 181 persons per square mile, has the scantiest population of any tract in South Bihār. The whole of the subdivision is very unhealthy, and it also suffered severely in the famine of 1896–7. It contains one town, BHABUĀ (population, 5,660), the head-quarters; and 1,427 villages. An old Hindu temple stands on Mundeswarī hill, and Chainpur also contains antiquities of some interest.

Dumraon Rāj.—Estate in Shāhābād District, Bengal, covering an area of about 758 square miles. The family of the Mahārājā trace their pedigree back to Rājā Vikramājīt, from whom the Samvat era of the Hindus is reckoned. Of their ancestors 69 were the rulers of Ujjain in Mālwa. The founder of the family in Shāhābād District was Rājā Santana Shāhi, who is said to have settled in the village of Karūr in 1320. During the war between Sher Shāh and Humāyūn (1534-40) Gajan Shāhi and Dalpat Shāhi, two rival princes of the family, joined opposing sides, and Gajan Shāhi received Rohtās and Shāhābād and the title of Rājā from Sher Shāh. Rājā Nārāyan Mal was the sole proprietor of Bhojpur and Jagdispur between 1607 and 1621; his brother Rājā Rudra Pratāp, who succeeded him, removed his residence to New Bhojpur. The head-quarters of the family were moved to Dumraon in 1745. In recent times Mahārājā Maheswar Bakhsh Singh, who came into possession in 1844, was made a K.C.S.I. for his loyalty and services to Government during the Mutiny. He was succeeded in 1881 by his only son, Rādhā Prasād Singh, who had already received the title of Rājā for his services during the famine of 1873-4. He was granted the title of Mahārājā Bahādur, and was subsequently made a K.C.I.E. in 1888. He died in 1894, leaving the present Mahārānī Benī Prasād Kuari as sole heiress and executrix to the estate for his only daughter, the senior Mahārānī of Rewah. The estate is permanently settled; in 1903-4 the current demand for land revenue and cesses payable to Government was 4.8 lakhs. The Rāj maintains an experimental farm at Dumraon, and two important fairs are held at Barahpur in Phālgun (February-March) and Baisākh (April-May), attended by about 120,000 and 150,000 persons respectively; at the former agricultural produce and stock are exhibited for prizes. A revenue-free grant of 1,500 acres in the Toungoo District of Lower Burma is also held by the Rānī.

Arrah Town (Arā).—Head-quarters of Shāhābād District, Bengal, situated in 25° 34' N. and 84° 40' E., on the East Indian Railway, 368 miles from Calcutta. The population increased from 39,386 in 1872 to 42,998 in 1881 and 46,905 in 1891, but fell to 46,170 in 1901, the decline being probably due to plague. Of the population in the last year, 32,903 were Hindus and 12,797 Musalmāns, while among the remainder were 433 Jains.

The town of Arrah is invested with a special historical interest as being the scene of a stirring episode in the Mutiny

of 1857. A body of rebels, consisting of about 2,000 sepoys from Dinapore and four times as many armed villagers under Kuar Singh, marched in the end of July on Arrah. They reached the town on the 27th of that month, and forthwith released all the prisoners in the jail and plundered the treasury. The European women and children had already been sent away, but there remained in the town about a dozen Englishmen and three or four other Christians of different races. The Commissioner of Patna, Mr. Tayler, had supplied a garrison of 50 Sikhs. At this time the East Indian Railway was in course of construction, under the local superintendence of Mr. Vicars Boyle, who fortunately had some knowledge of fortification. He occupied two houses, now known as the Judge's houses, the smaller of which, a two-storeyed building about 20 yards from the main house, was forthwith fortified and provisioned. The lower windows, &c., were built up, and sand-bags ranged on the roof. When the news came that the mutineers were advancing along the Arrah road, the Europeans and Sikhs retired to the smaller house. The rebels, after pillaging the town, made straight for Mr. Boyle's little fortress. A volley dispersed them, and forced them to seek the shelter of the larger house, only a few yards off, whence they carried on an almost continuous fire. They attempted to burn or smoke out the little garrison, and tried various other safe modes of attack; but they had no guns. Kuar Singh, however, produced two small cannon which he had dug up, and artillery missiles were improvised out of the house furniture. In the small house there was no thought of surrender. Mr. Herwald Wake, the Magistrate, put himself in command of the Sikhs, who, though sorely tempted by their countrymen among the mutineers, remained faithful throughout the siege. A relieving party of 150 European troops, sent by water from Dinapore, fell into an ambuscade on landing in Shāhābād; and as time passed away and no help arrived, provisions and water began to run short. A bold midnight sally resulted in the capture of four sheep, and water was obtained by digging a well 18 feet deep inside the house. A mine of the enemy was met by countermining. On August 2 the besieged party observed an unusual excitement in the neighbourhood. The fire of the enemy had slackened, and but few of them were visible. The sound of a distant cannonade was heard. Before sunset the eight days' siege was at an end, and on the following morning the gallant garrison welcomed their deliverers—Major Vincent Eyre, with 150 men of the 5th Fusiliers, a few

mounted volunteers, and three guns with 34 artillerymen. Major Eyre had dispersed Kuar Singh's forces on his way to Arrah, and they never rallied.

Ariah was constituted a municipality in 1865. The income during the decade ending 1901-2 averaged Rs. 52,000, and the expenditure Rs. 47,000. In 1903-4 the income was Rs. 55,000, including Rs. 21,000 derived from a tax on persons (or property tax), Rs. 11,000 from a water rate, Rs. 5,000 from a tax on vehicles, Rs. 4,000 from a municipal market, and Rs. 6,000 as special grants from Provincial and Local funds for medical purposes. The incidence of taxation was R. 0-14-3 per head of the population. In the same year the expenditure amounted to Rs. 48,000, the chief items being Rs. 10,000 on conservancy, Rs. 5,000 on water-supply, Rs. 8,000 on medical relief, and Rs. 5,000 on roads. The town is supplied with filtered water from the Son; the works, which cost upwards of 4 lakhs, were opened in 1894. Ariah contains the usual public buildings of a District head-quarters. The District jail has accommodation for 278 prisoners, who are employed chiefly on oil-pressing, thread-twisting, and carpet-making.

Bhabuā Town.—Head-quarters of the subdivision of the same name in Shāhābād District, Bengal, situated in 25° 3' N. and 83° 37' E. Population (1901), 5,660. It is connected by road with Bhabuā Road station on the Mughal Sarai (Fayā section of the East Indian Railway. Bhabuā was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 4,200, and the expenditure Rs. 3,500. In 1903-4 the income was Rs. 5,000, mainly from a tax on persons (or property tax); and the expenditure was Rs. 4,000. The town contains the usual public buildings; the sub-jail has accommodation for 14 prisoners.

Bihiyā.—Village in the head-quarters subdivision of Shāhābād District, Bengal, situated in 25° 33' N. and 84° 28' E., on the East Indian Railway, 382 miles from Calcutta. Population (1901), 764. Bihiyā is best known for the manufacture of iron sugar-cane mills, which are now in general use throughout Northern India.

Buxar Town (Baksar).—Head-quarters of the subdivision of the same name in Shāhābād District, Bengal, situated in 25° 34' N. and 83° 58' E., on the right bank of the Ganges. Population (1901), 13,945. Buxar is a station on the East Indian Railway, 411 miles from Calcutta, and is a considerable centre of trade. It is famous as the scene of the defeat in

1764 by Sir Hector Munro of Shujā-ud-daula and Mīr Kāsim, in the battle which finally won Bengal for the British. It is a place of great sanctity, and is said to have been originally called Vedagarbha, 'the womb of the Vedas,' as many of the inspired writers of the Vedic hymns lived here. Buxar was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 8,400, and the expenditure Rs. 7,700. In 1903-4 the income was Rs. 9,500, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 12,000. Buxar contains the usual public buildings, and also a Central jail with accommodation for 1,391 prisoners. The chief jail industry is the manufacture of tents, of which 2,705 were supplied to Government departments in 1903; cloth-weaving and the manufacture of prison clothing and uniforms for the police and *chaukidārs*, as well as for the Opium and Jail departments, are also extensively carried on. A subsidiary jail has accommodation for 61 prisoners.

Chainpur.—Village in the Bhabuā subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 2' N.$ and $83^{\circ} 31' E.$, 7 miles west of Bhabuā town. Population (1901), 2,870. The place was formerly the residence of the Chainpur Rājās, who were expelled by the Pathāns about 250 years ago. The old fort of Chainpur is surrounded by a ditch, and defended by a stone rampart flanked with bastions; it has a large gate in the northern and a smaller one in the southern curtain. The space within is covered with buildings, partly of brick and partly of stone, with several large wells. A mosque built as a tomb over Fateh Khān, who married a daughter of the emperor Sher Shāh, is still in good condition.

Chausā.—Village in the Buxar subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 31' N.$ and $83^{\circ} 54' E.$, on the East Indian Railway, close to the east bank of the Karamnāsā river, 4 miles west of Buxar town. Population (1901), 1,108. It is noted as the scene of the defeat of the emperor Humāyūn by the Afghān Sher Shāh in June, 1539. The emperor with a few friends managed to escape by crossing the Ganges, but 8,000 Mughal troops perished in attempting to follow him.

Dehri.—Village in the Sasarām subdivision of Shāhābād District, Bengal, situated in $24^{\circ} 55' N.$ and $84^{\circ} 11' E.$, on the west bank of the Son, where it is crossed by the grand trunk road and by the Mughal Sarai-Gayā section of the East Indian Railway. Population (1901), 4,296. It is important as the site of the head-works of the SON CANALS system.

Dumraon Town.—Town in the Buxar subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 33' N.$ and $84^{\circ} 9' E.$, on the East Indian Railway, 400 miles from Calcutta. Population (1901), 17,236. It is best known in connexion with the Dumraon Rāj, to which family it has given its name. The principal buildings are the palace and pavilion of the Rāj; and it also contains an experimental farm, maintained by the latter. Dumraon was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 7,500, and the expenditure Rs. 6,600. In 1903-4 the income was Rs. 9,600, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 8,000.

Jagdīspur.—Town in the head-quarters subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 28' N.$ and $84^{\circ} 26' E.$ Population (1901), 11,451. The town is a centre of the sugar industry. It was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 4,600, and the expenditure Rs. 4,400. In 1903-4 the income was Rs. 6,600, mainly from a tax on persons (or property tax); and the expenditure was Rs. 7,000.

Masār.—Village in the head-quarters subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 33' N.$ and $84^{\circ} 35' E.$, a little to the south of the East Indian Railway, about 6 miles west of Arrah. Population (1901), 3,073. Masār has been identified with the Mo-ho-so-lo of the Chinese pilgrim Hsien Tsiang, and from his account must then have stood close to the Ganges. The river now flows 9 miles to the north, but traces of the high banks of its old channel still remain. The old name of Masār, as proved by seven inscriptions in the Jain temple of Parasnāth, was Mahāsarā; but the original name is said to have been Sonitpur, famous as the residence of Bāna Rājā, whose daughter Ushā was married to a grandson of Krishnā¹. There is a Jain temple here with several Brāhmanical images and an inscription dated 1386. Dr. Buchanan-Hamilton discovered some Buddhist images in a heap of mud and bricks to the west of the village, which he assigned to the Cheros. There are fourteen fine old wells and numerous tanks. The population of the old town has been estimated at about 20,000. At present it is only a straggling village. A colossal image found at Masār was in 1882 removed to Arrah, and, the fragments being pieced together, it was set up in the public garden at that place; it appears to be of the

¹ Tezpur in Assam also claims to have been called Sonitpur, and to have been the capital of this Rājā.

Gupta period. Among other statues, those of Mahāmāya and Bhairab are noteworthy.

Mundeswari.—Hill in the Bhabuā subdivision of Shāhābād District, Bengal, situated in $25^{\circ} 2' N.$ and $83^{\circ} 35' E.$ It is the site of an interesting Hindu temple, dating from the sixth or seventh century, which is said to have been built by Manda Daitya, probably a Chero chief.

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. i (1838).]

Rohtāsgarh.—Hill-fort in the Sasarām subdivision of Shāhābād District, Bengal, situated in $24^{\circ} 37' N.$ and $83^{\circ} 55' E.$, about 30 miles south of Sasarām town, overlooking the confluence of the Koel with the Son. Population (1901), 1,899. It derives its name from the young prince Rohitāswa, son of Haris Chandra, king of the Solar race. Little or nothing is known concerning the persons who held the fort until 1100, when it is supposed to have belonged to Pratāp Dhawala, father of the last Hindu king. Sher Shāh captured Rohtāsgarh in 1539, and immediately began to strengthen the fortifications; but the work had not progressed very far, when he selected a more favourable site in the neighbourhood at the place still known as Shergarh. Mān Singh, Akbar's Hindu general, on being appointed viceroy of Bengal and Bihār, chose Rohtāsgarh as his stronghold, and, according to two inscriptions in Sanskrit and Persian, erected many of the buildings now existing. When he died, the fortress was attached to the office of Wazīr of the emperor, by whom the governors were appointed. The governor of the place in 1622-4 protected Shāh Jahān's family when that prince was in rebellion against his father. Rohtāsgarh was surrendered to the British soon after the battle of Buxar in 1764.

The remains of the fortress now occupy a part of the tableland, about 4 miles from east to west and 5 miles from north to south, with a circumference of nearly 28 miles. On the south-east corner of the plateau is an old temple called Rohtāsan, where an image of Rohitāswa was worshipped until destroyed by Aurangzeb. It is situated on a steep peak, and is approached by a great stone staircase arranged in groups of steps with successive landings. Close by is the temple of Haris Chandra, a graceful building consisting of a small pillared hall covered by five domes. Within the gate at Rāj Ghāt there must have been a very considerable building, which is thought to have formed the private residence of the commandant. Other remains, some of which date back to the time of Sher

Shāh, are scattered over the plateau. The most interesting of these is the palace or Mahālsarai, which is attributed to Mān Singh. It is irregularly built without any architectural pretensions, the most striking building being the main gateway, a massive structure consisting of a large Gothic arch, with the figure of an elephant on each side. The palace is, however, of great interest as being the only specimen of Mughal civil architecture in Bengal, and as giving an insight into the conditions of military life under that empire.

Sasarām Town (*Sahsarām*).—Head-quarters of the subdivision of the same name in Shāhābād District, Bengal, situated in $24^{\circ} 57' N.$ and $84^{\circ} 1' E.$, on the Mughal Sarai-Gayā section of the East Indian Railway, 406 miles from Calcutta. Population (1901), 23,644, of whom 13,647 were Hindus and 9,994 Musalmāns. The name Sasarām signifies 'one thousand toys': a certain Asura or demon is said to have lived here who had a thousand arms, each holding a separate plaything. The town is noted as containing the tomb of the Afghān Sher Shāh, who defeated Humāyūn, and subsequently became emperor of Delhi. His mausoleum is at the west end of the town, within a large tank, the excavated earth of which has been thrown into unshapely banks some distance off. The tomb itself consists of an octagonal hall surrounded by an arcade, which forms a gallery; and the roof is supported by four Gothic arches. The tomb of Sher Shāh's father, Hasan Shāh Sūri, is similar but less imposing. To the east of the town, near the summit of a spur of the Kaimur range on which the tomb of Hazrat Chandan Shahīd *pīr* is now venerated, there is an important Asoka inscription. Sasarām was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 16,000, and the expenditure Rs. 15,000. In 1903-4 the income was Rs. 17,000, mainly derived from a tax on persons (or property tax) and the receipts from a large municipal market; and the expenditure was Rs. 16,000.

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. i, pp. 423-30 (1838); *Archaeological Survey Reports*, vol. ix, pp. 132-9.]

Shergarh.—Ruined fort in the Sasarām subdivision of Shāhābād District, Bengal, situated in $24^{\circ} 50' N.$ and $83^{\circ} 44' E.$, 20 miles south-west of Sasarām town. The spot was selected by Sher Shāh as the site of a fortress soon after he had begun strengthening Rohtāsgarh, which he abandoned on discovering the superior advantages of Shergarh. The top of the rock is crowned with a rampart strengthened by numerous bastions

and bulwarks, with a grand ascent to the principal gate on the north. The fort itself contains several subterranean halls. About 7 miles from Shergarh is a cave called the Gupteswar cave, containing numerous stalactites, one of which is worshipped as the god Mahādeo. The cave has never been thoroughly explored.

Tilothu.—Village in the Sasarām subdivision of Shāhābād District, Bengal, situated in $24^{\circ} 49' N.$ and $84^{\circ} 6' E.$, 5 miles east of the gorge by which the Tutrāhi, a tributary of the Kudra river, leaves the hills. Population (1901), 2,592. This spot is sacred to the goddess Sītala. The gorge itself is half a mile long, terminating in a sheer horseshoe precipice from 180 to 250 feet high, down which the river falls. The rock at first recedes at an angle of 100° for about one-third of the height; but above that it overhangs, forming a re-entering angle. The chief object of interest is an image, bearing the date 1332, which is said to have been placed here by the Cheros. It represents a many-armed female killing a man as he springs from the neck of a buffalo. A fair is held here every year on the last day of Kārtik, which is attended by about 100,000 persons.

Sāran District.—District in the Patnā Division of Bengal, lying between $25^{\circ} 39'$ and $26^{\circ} 39' N.$ and $83^{\circ} 54'$ and $85^{\circ} 12' E.$, with an area of 2,674¹ square miles. The name is said to be derived from the Sanskrit *Sarana*, meaning 'refuge'; and there is a legend that some demons converted here by Buddha sought the 'refuge' of the Buddhist triad, Buddha, Dharma, and Sangha. The District is a wedge of alluvial soil, between the Ganges and the Gandak rivers, with its apex pointing south-eastwards towards Patna city. The Gandak separates it on the east from Muzaffarpur and Champāran, and on the south the Ganges forms the boundary dividing it from Patna and Shāhābād. The western boundary marches with the United Provinces. The Gogrā, running parallel with the Gandak, meets the Ganges opposite the head-quarters station of Chāpra and forms the south-west boundary between Sāran and Balliā District, while an irregular base-line drawn north-east from the Gogrā to the Gandak constitutes the western boundary with Gorakhpur.

Sāran is a beautifully wooded plain, highly cultivated and densely populated, without a hill and hardly any elevations except those which mark the site of some old fortress or

¹ This area, which differs from that given in the *Census Report* of 1901 (2,656 square miles), is that ascertained in the recent survey operations.

deserted village. It is very fertile, and is intersected by numerous water-channels which all flow in a south-easterly direction. The GANGES, the GANDAK, and the GOGRĀ are described elsewhere. The Dāha or Sandī, Gandaki, Dhanai, and Ghangri were originally spill-channels from the Gandak, with which, however, their connexion has been severed by the Gandak embankment; they form the system known as the Sāran Canals. Similar streams are the Khanuā, Jharahi, and Khatsā, which ultimately fall into the Gogrā or Ganges. The channels of the Ganges, Gandak, and Gogrā are perpetually oscillating; and sandbanks form in the beds of the rivers one year, only to be swept away the next, so that frequent changes in jurisdiction are necessary.

Geology. The soil consists of alluvial deposits, the base of which belongs to an older alluvial formation composed of massive argillaceous beds, disseminated throughout which occur *kankar* and pisolitic ferruginous concretions. These clay soils, locally known as *bhāt*, are exposed in marshy depressions called *chaurs*, which are scattered over the District. Elsewhere they are overlaid with more recent sandy deposits known as *bāngar*.

Botany. Though the District contains no forests, it is well timbered, the most conspicuous trees being the *sissū* (*Dalbergia Sissoo*), red cotton-tree (*Bombax malabaricum*), and tamarind. The village sites are embedded in groves of the palmyra palm (*Borassus flabellifer*), the date-palm (*Phoenix sylvestris*), and other semi-spontaneous and more or less useful species. The groves of mango-trees planted in beautifully regular lines are a marked feature of the landscape. The surface is highly cultivated, but the banks of streams and patches of waste land are covered by a dry scrub jungle of shrubs of the order of *Euphorbiaceae*, *Butea*, and other leguminous trees, and species of *Ficus*, *Schleichera*, *Wendlandia*, and *Gmelina*.

Fauna. *Nilgai* and wild hog are common in the low scrub jungle which is met with on the alluvial islands, and are very destructive to crops. Wolves carry off a considerable number of infants, snakes are very numerous, and crocodiles infest the large rivers.

Climate, temperature, and rainfall. The winter months are delightfully cool, but the dry heat is intense during May and June. The mean temperature varies from 62° in January to 89° in May, and the maximum from 73° in January to 100° in April and May, while the mean minimum ranges from 50° in January to 79° in June to August. Sāran is one of the driest Districts in Bengal, the average

annual rainfall being only 45 inches. The monsoon commences in June, when 6.9 inches fall, and the maximum monthly fall of 12.1 inches is reached in July. The average fall for August is 11 inches and for September 7.6 inches. Humidity ranges from 57 per cent. in April to 88 per cent. in August. The rainfall is capricious, and during the decade ending 1901 it varied from 24 inches in 1896-7 (the lowest on record) to 65 inches in 1899-1900.

The District has always been liable to floods, which occur when the waters of the smaller rivers are banked up by high floods in the great rivers into which they flow. An embankment constructed along the right bank of the Gandak for a distance of 99 miles now protects the north-east of the District, but the south-west and south are still exposed to inundation from the Gogrā and Ganges.

At the dawn of history Sāran formed the eastern limit of the ancient kingdom of the Kosalas, whose head-quarters were in Oudh and who were separated by the Gandak river from the eastern kingdom of Mithilā. Very little is known of it, and the absence of any reference in the early Vedic literature and the paucity of Buddhist remains render it probable that it maintained its character as a vast jungle for a much longer period than either of the adjoining Districts of Muzaffarpur or Champāran. Indeed, the earliest authentic relic which has been found in Sāran is an inscribed copper-plate preserved in the village of Dighwā Dubauliā, about 34 miles north-east of Chāpra, which Dr. Rājendralāla Mitra declares to be the counterpart of a similar plate found by Colonel Stacy near Benares, dealing with the grant of a village by Rājā Bhoja Deva, paramount sovereign of Gwalior about A.D. 876. The mediaeval history of the District is connected with the fortunes of the HARHWĀ family, whose head-quarters were at Husepur. Siwān and Mānjhi were fortified seats of turbulent Musalmān freebooters, while Mānjha, Parsā, Mirzāpur, Pāterha, and Cherānd were during the same period the head-quarters of powerful Hindu chieftains.

The recorded population increased from 2,076,640 in 1872 to 2,295,207 in 1881 and 2,465,007 in 1891, but fell to 2,409,509 in 1901. The increases of 10½ per cent. between 1872 and 1881 and of 7.4 per cent. during the next decade are partly attributable to improved enumeration. Several causes contributed towards the decrease of 2.2 per cent. during the last decade. The District already contained a larger population than it can support and the volume of emigration

sensibly increased. The famine of 1897 told severely on the people, and, though it caused no direct mortality, reduced their vitality and lowered the birth-rate. Plague also assumed epidemic proportions during the winter of 1900-1.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles	Number of		Population	Population per square mile.	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write
		Towns	Villages.				
Chāpra . . .	1,048	2	2,179	972,718	928	- 5.5	43,472
Gopālganj . .	788	1	2,148	635,047	806	+ 0.1	14,967
Siwān . . .	838	1	1,528	801,744	957	+ 0.1	24,741
District total	2,674	4	5,855	2,409,509	901	- 2.2	83,180

The four towns are CHĀPRA, SIWĀN, REVELGANJ, and MĪRGANJ. The villages are small, and their average population is only 397, as compared with 602 in North Bihār as a whole. The density of population is surpassed in only two Bengal Districts. It is very evenly distributed throughout the District, and only one *thāna* has less than 800 persons per square mile. Sāran sends out a greater proportion of emigrants than any other District in Bengal outside Chotā Nāgpur, and in 1901 more than a tenth of the District-born population were enumerated away from home; about one-fifth of the absentees were found in contiguous Districts, but the remainder had gone farther afield and were enumerated in large numbers in Rangpur, Calcutta, and the Twenty-four Parganas. Owing to this emigration, the proportion of females to males (6 to 5) is the highest in Bengal. Infant marriage is much less common than in other parts of Bihār; and there has been a marked falling off during the last two decades in the proportion of married persons, and also in the number of children, which points to preventive checks on the growth of population. The language spoken is the Bhojpuri dialect of Hindī, but Muhammadans and Kāyasths generally speak Awadhī. Seven-eighths of the population are Hindus (2,124,641), and practically all the rest are Muhammadans (284,541).

Castes and occupations. The Aryan castes are strongly represented, as Sāran lay in their line of march eastwards. Brāhmins number 184,000, Rājputs 259,000, Bābhans 106,000, Kāyasths 49,000, and Ahīrs 290,000, more than a third of the population belonging to these five castes. Those excellent husbandmen, the Koiris

and Kurmīs, are numerous, as also are Chamārs (leather-dressers), Kāndus (grain-parchers), Nuniās (saltpetre manufacturers), Dosādhs, and the common Bihār functional castes. Among the Muhammadan tribes, 18,500 Pathāns and 6,000 Saiyids are probably descendants of foreigners, but the ancestors of 97,000 Jolāhās and 63,000 Shaikhs were doubtless local converts to Islām. Of every 100 persons, 81 are agriculturists, 9 are engaged in industry, one belongs to the professional classes, 4 are general labourers, and the remainder follow other occupations. The proportion of agriculturists is the highest in Bihār.

The German Evangelical Lutheran Mission, which has been at work at Chāpra since 1840, claims to have baptized 500 persons, most of whom were probably abandoned children or orphans. A Roman Catholic mission has recently been started at Chāpra, and a branch of the 'Regions Beyond' Missionary Union at Siwān. The number of native Christians in 1901 was only 78.

The hard clay in the low swamps (*chaur*s) produces only a somewhat precarious crop of winter rice, and, being dependent on the rainfall, is the first to suffer from drought. On the light sandy uplands an autumn rice crop is obtained, which is generally followed by a spring crop of poppy, indigo, barley, wheat, sugar-cane, pulses, or oilseeds. The most fertile soil is a rich loam known as *hachh*; and the finest yield is obtained from the lands round the village sites, which are highly manured, and are reserved for such lucrative crops as poppy, wheat, vegetables, and condiments. A seasonable rainfall is of special importance in a District where the normal precipitation is small, and where only 15 per cent. of the cultivated area is protected by irrigation. The crucial period when rain is urgently needed is the last fortnight of September, and during the *hathiyā* asterism at the beginning of October. A drought during this period not only ruins the winter rice, but also deprives the soil of the moisture necessary for the subsequent spring crops.

The chief agricultural statistics for 1903-4 are shown in the table on the next page, in square miles.

Rice is the most important crop, covering an area of 516 square miles, or a quarter of the total cultivated area; about 16 per cent. of it is harvested in the autumn and the remainder in the winter. Barley and maize cover 19 and 15 per cent. respectively of the cultivated area. *Khesāri* pulse, which is sown extensively as a catch-crop in winter

Christian
missions.

General
agricul-
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rice lands, may be called the poor man's food. The most extensive non-food crops are oilseeds, linseed occupying 124 square miles, and rape and mustard 17 square miles. Sugar-cane, which is being largely substituted for indigo, occupies 3 per cent. of the cultivated area. Indigo in 1903-4 covered only 19,300 acres, or less than half the area sown five years before. Sāran is the premier opium District in Bengal, and the out-turn in the same year was 282 tons.

Subdivision	Total.	Cultivated.	Cultivable waste.
Chāpra . . .	1,048	780	110
Gopālganj . . .	788	622	88
Siwān . . .	838	661	91
Total	2,674	2,063	289

Improvements in agricultural practice. Cultivation has long ago reached its utmost limit, and there is no room for expansion. Little advantage is taken of Government loans; the only considerable advances made were in the famine year 1897, when 2.31 lakhs was lent under the Agriculturists' Loans Act.

Cattle. The cattle are generally poor; the best come from north Muzaffarpur and Darbhanga and from the United Provinces. Pasturage is insufficient, and in the cold season large herds are grazed in Champāran. The Hathwā Rāj has recently established a cattle-breeding farm at Srīpur. Most of the horses and ponies come from Balliā and elsewhere in the United Provinces, but a few are bred in Sāran. The most important fair in Bengal is that held at SONPUR, where large numbers of elephants, ponies, and cattle are sold.

Irrigation. Of the cultivated area, 15 per cent. is irrigated, and of every 100 acres irrigated 72 are watered from wells, 18 from tanks and reservoirs, 3 from private channels, and the remainder from other sources. The number of wells is 30,000, of which 27,000 are of masonry. The only Government irrigation works are the Sāran Canals, which derive their water-supply from the Gandak. In addition to the main canal with a length of $6\frac{1}{2}$ miles and a branch of $12\frac{1}{2}$ miles, certain natural channels are used to convey the water. There is no weir across the river; and, owing to the uncertainty of the water-supply and other causes, the scheme has been a failure, and the canals were closed in 1898. They have, however, occasionally been reopened in especially dry years. In 1902, for instance, 3,000 acres were irrigated during the *rabi* season free of charge.

The only minerals are salt (in very small quantities), salt-petre, Glauber's salt, potter's clay, and nodular limestone (*kankar*).

A little coarse cloth is woven, but the industry is declining. Cloth is printed with Mirzāpur stamps, or stamped with gold- and silver-leaf ornamentation. Siwān brass-ware has more than a local reputation, which is well deserved, as the materials are good and the workmanship excellent. A little black and red and glazed pottery is also made at Siwān. Saltpetre was an important item in the exports from India until the end of the French Wars, and considerable quantities still find their way to Europe. The crude saltpetre is extracted from saliferous earth by a rough process of lixiviation; this is refined by boiling and is then ready for the market. In 1903-4, 10,533 tons of saltpetre were produced, of which 2,582 tons were refined saltpetre and 7,846 tons crude saltpetre, and 105 tons were sulphate of soda. The industry is in the hands of the Nuniā caste. In 1903, 27 indigo factories were at work in the District. The industry is declining rapidly owing to the competition of the artificial dye; and several factories have already been closed, while others are reducing the scale of their operations. The reported out-turn for 1903-4 was 95 tons, valued at 3.27 lakhs. A sugar factory has recently been erected at Barhogā, where the cane is crushed and the juice boiled and clarified and manufactured into sugar by imported machinery. Various indigo concerns are following the example, and a good deal of sugar is also prepared in native refineries. Shellac is manufactured, and 8 factories were at work in 1901 with an out-turn valued at over 3 lakhs.

Sāran never produces sufficient food for its own consumption, and imports largely exceed exports, the cost of the surplus imports being met from the earnings of natives of the District employed elsewhere, who send large remittances for the support of their families. The principal imports are rice and other food-grains from Muzaffarpur, Darbhanga, and Bhāgalpur, cotton piece-goods, salt, and kerosene oil from Calcutta, and coal from Burdwan and Chotā Nāgpur. The exports are opium, sugar, indigo, saltpetre, shellac, molasses, linseed, mustard seed, gram, pulses, and other food-grains. Most of the exports go to Calcutta, but the sugar finds a market in the United Provinces. The bulk of the traffic now goes by railway; and the principal marts are CHĀPRA, REVELGANJ, SIWĀN, MAHĀRĀJGANJ, MĪRGANJ, Dighwāra, SONPUR, and Mairwā.

Railways. The main line of the Bengal and North-Western Railway traverses the District from Sonpur at the south-east corner to Mairwā on the western boundary. A branch line connects Chāpra via Revelganj with Mānjhi, where the Gogrā is crossed by a steam ferry. A fine bridge spans the Gandak between Sonpur in Sāran and Hājipur in Muzaffarpur, and effects a junction with the Tirhut State Railway system, now worked by the Bengal and North-Western Railway Company, and via Katihār with the northern section of the Eastern Bengal State Railway. The Bengal and North-Western Railway is connected with the East Indian Railway by a steam ferry from Palezā Ghāt, near Sonpur, to Dīgha Ghāt on the opposite bank.

Roads. The chief lines of road run from north to south, originally connecting the Gandak with the Gogrā (and now with the railway), and following the old trade routes from Nepāl through Champāran and Muzaffarpur. From Chāpra important roads lead to Rewah Ghāt, Sattar Ghāt, and Salimpur Ghāt, all on the Gandak. Other roads also converge on these points, such as that from Dorandā railway station to Mahārājanj, and thence northwards to Barauli and Salimpur Ghāt. The road from Siwān to Mīrganj, and thence to Gopālganj and through Batardah to the Champāran border, is also of importance. In 1903-4 the District contained 1,219 miles of roads maintained by the District board, of which 137 were metalled and 1,082 unmetalled, besides 1,428 miles of village tracks.

Water communications. The India General Steam Navigation Company has a daily steamer service on the Ganges and Gogrā from Dīgha Ghāt in Patna District, nearly opposite Sonpur, to Ajodhyā in Oudh. These steamers connect at Dīgha Ghāt with the Goalundo line, and are often crowded with coolies on their way going to or returning from Eastern Bengal. Numerous important ferries cross the Ganges, Gandak, and Gogrā rivers.

Famine. Sāran is less liable to famine than the neighbouring Districts, as it is protected both by the number and variety of its crops, and by the distribution of its harvests throughout the year. Nevertheless famine or scarcity has occurred on several occasions, notably in 1769, 1783, 1866, 1874, and 1897. Little is known of the first two calamities. In 1866, the year of the Orissa famine, the winter rice failed and the spring crops were extremely poor; the relief afforded was inadequate, and over 8,000 persons died of starvation and disease. In 1874 famine was caused by the failure of nine-tenths of the winter rice crop. Relief on this occasion was given on an extravagant scale, and no deaths occurred from starvation;

the number on relief works exceeded a quarter of a million in June 1874. No less than 40,000 tons of grain were imported by Government, and the expenditure was 24 lakhs. In 1896 the rainfall was very deficient, amounting to only 23 inches, and the autumn crop yielded less than half and the winter rice only one-sixteenth of the normal out-turn. In spite of this, the famine was much less severe than in the neighbouring Districts, and the maximum number on relief works was only 24,000 in May, 1897. The cost of relief was 9 lakhs.

For administrative purposes the District is divided into three subdivisions, with head-quarters at CHĀPRA, SIWĀN, and GOPĀLGANJ. The staff at head-quarters consists of the District Magistrate-Collector, an Assistant Magistrate, and five Deputy-Magistrates, besides officers employed specially on partition and excise work. Each of the outlying subdivisions is in charge of a subdivisional officer, assisted by a Sub-Deputy-Collector.

Subordinate to the District Judge are two Sub-Judges and four Munsifs at Chāpra, one Munsif at Siwān, and another at Gopālganj. The Sub-Judges hear appeals from the Champāran civil courts also. Since the completion of the survey and record-of-rights the number of rent suits has greatly increased. Criminal justice is administered by the Sessions Judge, an Assistant Sessions Judge, the District Magistrate, and the above-mentioned stipendiary magistrates. Burglary and petty theft are common and riots are frequent, but there is very little heinous crime.

In Todar Mal's settlement of 1582 Sāran was assessed at 4 lakhs, the area measured being 415 square miles. In 1685 the revenue was raised to 8 lakhs, and in 1750 to 9½ lakhs, of which half a lakh was remitted. In 1773, eight years after the British assumed the financial administration, the revenue was 9.36 lakhs, and in 1793 the Permanent Settlement was concluded for 10.27 lakhs. A number of estates held free of revenue under invalid titles have since been resumed, and the demand in 1903-4 was 12.63 lakhs, payable by 5,506 estates. Almost the entire District is permanently settled; but 78 estates paying Rs. 15,000 are settled temporarily, and 28 estates with a revenue of Rs. 12,000 are managed direct by Government. It is noteworthy that, whereas the allowance fixed for the *zamīndārs* at the Permanent Settlement was one-tenth of the 'assets,' the Sāran landlords now retain no less than 78 per cent. As the result of a very careful calculation by the Settlement officer, the gross annual produce of the soil is valued

at 425 lakhs, of which sum the revenue represents less than 3 per cent. and the rental 12 per cent. The District was surveyed and a record-of-rights was prepared between 1893 and 1901. The average area cultivated by a family is estimated at 3.8 acres. Cash rents are almost universal, only 4 per cent. of the holdings of settled and occupancy ryots paying produce rents. The average rates of rent per acre vary for the different classes of ryots : those holding at fixed rates pay Rs. 3-4-9 ; settled or occupancy ryots, Rs. 4-5-4 ; non-occupancy ryots, Rs. 5-0-6 ; and under-ryots, Rs. 5-2-8. Lower rents rule in the north than in the south, where the pressure of population is greatest and cultivation more advanced. Of the occupied area 90 per cent. is held by ryots, and practically all of them have a right of occupancy, only 15,000 acres being held by non-occupancy ryots.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	12,55	12,49	12,70	12,57
Total revenue . .	20,22	22,21	25,17	25,21

Local and
municipal
govern-
ment.

Outside the municipalities of CHĀPRA, SIWĀN, and REVELGANJ, local affairs are managed by the District board, with subordinate local boards at Siwān and Gopālganj. As many as 19 Europeans, principally indigo planters, have seats upon the board. In 1903-4 its income was Rs. 2,44,000, of which Rs. 1,54,000 was derived from rates, and the expenditure was Rs. 2,43,000, including Rs. 1,17,000 spent on public works and Rs. 42,000 on education.

Police and
jails.

The District contains 10 police stations and 16 outposts. The force at the disposal of the District Superintendent in 1903 numbered 4 inspectors, 40 sub-inspectors, 37 head-constables, and 508 constables. The rural police consisted of 340 *daffadārs* and 3,971 *chaukidārs*. An inspector with a special guard is in charge of the settlements of the criminal tribe known as the Magahiyā Doms, who in 1901 numbered 1,048 persons. The District jail at Chāpra has accommodation for 305 prisoners, and subsidiary jails at the other sub-divisional head-quarters for 50.

Education.

Education is backward, and only 3.5 per cent. of the population (7.3 males and 0.2 females) were literate in 1901. The number of pupils under instruction rose from about 18,000 in

1883-4 to 24,088 in 1892-3, but fell to 23,683 in 1900-1. In 1903-4, 23,643 boys and 1,326 girls were at school, being respectively 16.9 and 0.69 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 949: namely, 20 secondary, 687 primary, and 242 special schools. The expenditure on education was Rs. 1,19,000, of which Rs. 12,000 was derived from Provincial funds, Rs. 41,000 from District funds, Rs. 3,500 from municipal funds, and Rs. 40,000 from fees. The schools include 12 night schools for bona fide agriculturists and day-labourers, and 3 schools for Doms, Chamārs, and other depressed castes.

In 1903 the District contained 12 dispensaries, of which Medical. 4 had accommodation for 135 in-patients. The cases of 145,000 out-patients and 1,356 in-patients were treated, and 6,645 operations were performed. The expenditure was Rs. 1,54,000, of which Rs. 1,000 was met from Government contributions, Rs. 6,000 each from Local and from municipal funds, and Rs. 1,37,000 from subscriptions. These figures include a sum of Rs. 1,33,000 subscribed for the Hathwā Victoria Hospital, of which Rs. 1,24,000 was spent on the buildings.

Vaccination is compulsory only in the municipal towns, Vaccina- outside which it is backward. In 1903-4 the number of tion. persons successfully vaccinated was 54,000, representing 23.2 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xi (1877); J. H. Kerr, *Settlement Report* (Calcutta, 1904).]

Chāpra Subdivision.—Head-quarters subdivision of Sāran District, Bengal, occupying its south-east extremity, and lying between 25° 39' and 26° 14' N. and 84° 23' and 85° 12' E., with an area of 1,048 square miles. The subdivision is a fertile tract of rich alluvial soil, between the Gogrā, Ganges, and Gandak. The population was 972,718 in 1901, compared with 1,029,639 in 1891, the decrease being largely due to severe epidemics of plague in 1900 and 1901. The density is 928 persons per square mile. There are two towns, CHĀPRA (population, 45,901), the head-quarters, and REVELGANJ (9,765); and 2,179 villages. SONPUR, at the confluence of the Ganges and Gandak, is an important railway centre and the scene of a great annual fair and bathing festival.

Gopālganj Subdivision.—Northern subdivision of Sāran District, Bengal, lying between 26° 12' and 26° 39' N. and 83° 54' and 84° 55' E., with an area of 788 square miles.

The subdivision consists of a level alluvial plain, bounded on the east by the Gandak river. The population in 1901 was 635,047, compared with 634,630 in 1891. This is the least crowded part of the District, supporting only 806 persons per square mile. It contains one town, MĪRGANJ (population, 9,698), and 2,148 villages; the head-quarters are at GOPĀLGANJ VILLAGE.

Siwān Subdivision.—Central subdivision of Sāran District, Bengal, lying between $25^{\circ} 56'$ and $26^{\circ} 22'$ N. and $84^{\circ} 0'$ and $84^{\circ} 47'$ E., with an area of 838 square miles. The subdivision is an alluvial tract, intersected by numerous rivers and water-channels. The population in 1901 was 801,744, compared with 800,738 in 1891. This is the most densely populated part of the District, supporting 957 persons per square mile. It contains one town, SIWĀN (population, 15,756), the head-quarters; and 1,528 villages.

Hathwā Rāj.—Estate in Bengal, situated for the most part in a compact block in the north-west of Sāran District, but also comprising property in Champāran, Muzaffarpur, Shāhābād, Patna, and Darjeeling, and in the Gorakhpur District of the United Provinces. It has an area of 561 square miles, of which 491 square miles are cultivated. The population in 1901 was 534,905. The rent-roll (including cesses) in 1903-4 amounted to 11.51 lakhs, and the land revenue and cesses to 2.55 lakhs.

The Hathwā Rāj family is regarded as one of the oldest of the aristocratic houses in Bihār, and is said to have been settled in Sāran for more than a hundred generations. The family is of the caste of Gautama Bābhans or Bhuinhārs, to which the Mahārājās of Benares, Bettiah, and Tekāri also belong. The authentic history of Rāj Husepur or Hathwā commences with the time of Mahārājā Fateh Sāhi. When the East India Company obtained the Dīwānī of Bengal, Bihār, and Orissa in 1765, Fateh Sāhi not only refused to pay revenue but resisted the Company's troops who were sent against him, and was with difficulty expelled from Husepur. He retired to a large tract of forest between Gorakhpur and Sāran, whence he frequently invaded the British territories, and gave constant trouble until 1775. For some years the estate remained under the direct management of Government, but in 1791 Lord Cornwallis restored it to Chhatardhāri Sāhi, a grand-nephew of Fateh Sāhi. The title of Mahārājā Bahādur was conferred on him in 1837, Fateh Sāhi having died in the interim. During the Mutiny the Mahārājā displayed conspicuous loyalty,

and was rewarded by the gift of some confiscated villages in Shāhābād District, which yielded a gross rental of Rs. 20,000 per annum. Mahārājā Chhatardhārī Sāhi Bahādur died in 1858 and was succeeded by his great-grandson, Mahārājā Rājendra Pratāp Sāhi, who held the estate until his death in 1896, when the Court of Wards took possession on behalf of his minor son. In 1868 the Privy Council held that the estate is an impartible Rāj descending to the eldest son. At Hathwā, 12 miles north of Siwān, stands the Mahārājā's palace, a splendid modern building with one of the most magnificent *darbār* halls in India. The Māhārānī has recently built a handsome hospital, named the Victoria Hospital. A model agricultural and cattle-breeding farm has been opened at Srīpur.

Chāpra Town.—Head-quarters of Sāran District, Bengal, situated in $25^{\circ} 47'$ N. and $84^{\circ} 44'$ E., on the north or left bank of the Gogrā, close to its junction with the Ganges. In 1901 the population was 45,901, or nearly 12,000 less than in 1891, the decrease being mainly due to a temporary exodus of the population which took place in consequence of an outbreak of plague just before the Census. Of the total, 34,862 were Hindus and 10,934 Musalmāns. The Gogrā formerly flowed close by the town, but it has shifted its course a mile to the south; the river inundated the town in 1871 and again in 1890.

In the eighteenth century the French, Dutch, Portuguese, and English had factories at Chāpra; but a severe blow was dealt to the commercial prosperity of the place when it was deserted, first by the Ganges and later by the Gogrā. The railway, however, now affords new facilities for trade. The principal imports are rice, kerosene oil, gunny-bags, Indian and European cotton piece-goods and twist, and salt; and the principal exports are saltpetre, opium, linseed, *gur* (raw sugar), and shellac. Chāpra is the head-quarters of a troop of the Bihār Light Horse, and of a detachment of the Bengal and North-Western Railway Volunteers.

The town has in recent years suffered severely from plague, which made its first appearance in March, 1900. It disappeared at the end of May, but again broke out in epidemic form later in the year; and during the months of October, 1900, to March, 1901, 1,984 deaths were reported. A serious panic ensued, trade was dislocated, and thousands of people left the town. In 1902 a less serious outbreak occurred, and again during the winter of 1902-3 there was another very severe epidemic, 2,138 deaths being recorded between November and February.

Chāpra was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged Rs. 44,000, and the expenditure Rs. 41,000. In 1903-4 the income was Rs. 59,000, including Rs. 30,000 derived from a tax on houses and lands; and the expenditure was Rs. 50,000. The main drains are flushed and some of the public tanks filled by the flood-water of the Gogrā, which is admitted through the Sāhibganj sluice. A fine *sarai* is under the management of the municipal commissioners, who also own two municipal markets and a dispensary. The District jail has accommodation for 305 prisoners. A large building is occupied by the Government English school, and there are also two private high schools. Chāpra is the head-quarters of the German Evangelical Lutheran Mission, and a Roman Catholic mission has recently been started.

Gopālganj Village.—Head-quarters of the subdivision of the same name in Sāran District, Bengal, situated in $26^{\circ} 28' N.$ and $84^{\circ} 27' E.$ Population (1901), 1,614. It contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Mahārājganj.—Village in the Siwān subdivision of Sāran District, Bengal, situated in $26^{\circ} 7' N.$ and $84^{\circ} 30' E.$ Population (1901), 3,300. It is an important trade centre, with a large export of grain, sugar, and spices, and an import of salt and English piece-goods.

Mirganj.—Town in the Gopālganj subdivision of Sāran District, Bengal, situated in $26^{\circ} 25' N.$ and $84^{\circ} 20' E.$ Population (1901), 6,698. It is a large trading centre.

Revelganj (or Godnā).—Town in the head-quarters subdivision of Sāran District, Bengal, situated in $25^{\circ} 47' N.$ and $84^{\circ} 39' E.$, on the left bank of the Gogrā river. Population (1901), 9,765. The town is named after Mr. Revell, who was Collector of Government Customs in 1788. It was formerly a very important trade centre, but the railway has robbed it of much of its business. Revelganj was constituted a municipality in 1876. The income and expenditure during the decade ending 1901-2 averaged Rs. 9,000 each. In 1903-4 the income was Rs. 11,000, derived mainly from tolls and a tax on houses and lands; and the expenditure was Rs. 8,000.

Siwān Town (or Aliganj Sewān).—Head-quarters of the subdivision of the same name in Sāran District, Bengal, situated in $26^{\circ} 13' N.$ and $84^{\circ} 21' E.$ Population (1901), 15,756. Superior pottery is manufactured here, and the town is noted for its brass-ware. Siwān was constituted a municipi-

pality in 1869. The income during the decade ending 1901-2 averaged Rs. 9,600, and the expenditure Rs. 8,500. In 1903-4 the income was Rs. 11,000, mainly derived from a tax on persons (or property tax); and the expenditure amounted to the same sum. The town contains the usual public offices; the sub-jail has accommodation for 32 prisoners.

Sonpur Village.—Village in the head-quarters subdivision of Sāran District, Bengal, situated in $25^{\circ} 42' N.$ and $85^{\circ} 12' E.$, on the right bank of the Gandak, close to its confluence with the Ganges. Population (1901), 3,355. It is an important station on the Bengal and North-Western Railway, which crosses the Gandak by a fine bridge connecting Sonpur with Hājipur on the left bank. There are railway workshops which employ about 1,000 hands. The Sonpur fair, or Hanhar Chattar *mela*, is held at the confluence of the Gandak and Ganges at the November full moon, and is probably one of the oldest fairs in India. It was at Sonpur that Vishnu is reputed to have rescued the elephant from the jaws of the crocodile; and it was here that Rāma, when on his way to Janakpur to win Sitā, built a temple to Harihar Nāth Mahādeo, which is still largely frequented by pilgrims. The fair lasts for a fortnight, but is at its height for two days before and after the full moon, when Hindus bathe in the Ganges and thus acquire exceptional merit. Immense numbers assemble, and goods and animals, especially elephants, horses, and cattle, are exposed for sale. A cattle show is held at the fair, which is the largest elephant market in India. In days gone by the Sonpur race meeting was one of the most famous on this side of India, but many causes have combined to rob the meeting of its former glories. It is still, however, one of the pleasantest picnic gatherings in India for Europeans, who meet in camp under the shade of a magnificent mango grove and amuse themselves with races, dances, polo, tennis, and visits to the fair, which presents Indian life under many interesting aspects.

Champāran (*Champak-aranya*, 'the forest of *champak*' or *Michelia Champaca*).—District in the Patna Division of Bengal, occupying the north-west corner of Bihār, lying between $26^{\circ} 16'$ and $27^{\circ} 31' N.$ and $83^{\circ} 50'$ and $85^{\circ} 18' E.$, with an area of 3,531 square miles. The District extends along the left bank of the Gandak for 100 miles, having a breadth of 20 miles at the northern, and 40 miles at the southern extremity. The northern boundary marches with Nepāl; on the west the Gandak separates it from the Gorakhpur District

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of the United Provinces, and from the Sāran District of Bengal; while on the east and south it is bounded by Muzaffarpur, from which it is divided on the east by the Bāghmati river. The Nepāl frontier, where not naturally formed by rivers, is marked by ditches and masonry pillars, and for a considerable distance runs along the crest of the Someswar range. At one point the District crosses the Gandak, including a large tract of alluvial land which the river has thrown up on its right bank.

Outliers of the Himālayas extend for 15 miles into the alluvial plain which occupies the rest of the District. The Someswar range, which culminates in a hill of the same name 2,884 feet above sea-level, is generally clothed with fine trees, though in places it rises in bare and inaccessible crags. At its eastern extremity the Kudi river pierces it and forms the pass leading into Deoghāt in Nepāl, through which a British force successfully marched in 1815. The ascent of Someswar hill lies up the bed of the Jūri Pānī river amid romantic scenery. The summit overlooks the Maurī valley in Nepāl, and commands an unequalled view of Mount Everest, and of the great snow peaks of Dhaulāgiri, Gosainsthān, and Urapūrnā. A bungalow has been built near the top of the hill. The other principal passes are the Someswar, Kāpan, and Harhā. South of the Someswar range the Dūn hills stretch across the District. To the north extend forests, in which the finest timber has long been cut, and great expanses of well-watered grass prairie, which afford pasturage to enormous herds of cattle.

The District is divided by the Burhī ('old') Gandak into two tracts of different characteristics. To the north is old alluvium, where the soil is mainly hard clay suitable for winter rice. The southern tract is recent alluvium deposited during the oscillations of the Gandak, a lighter soil which grows millets, pulses, cereals, and oilseeds. The Burhī Gandak, variously known as the Harhā, the Sikrāna, and the Masān, rises in the western extremity of the Someswar range, and is navigable as far as Sagauli by boats of 7 to 15 tons burden, though it is fordable during the dry season. Like the Gandak, the Burhī Gandak becomes a torrent in the rains. The Bāghmati is navigable by boats of 15 to 18 tons burden, and has a very swift current. In the rains it rises rapidly and overflows its banks, sometimes causing great devastation. This river has often changed its course, and the soil is very light and friable along its banks. Through the centre of the

District runs a chain of forty-three lakes, which evidently mark an old bed of the Great Gandak.

The surface is for the most part covered by alluvium, but the Someswar and Dūn hills possess the characteristic features of the lower Himālayan slopes. They consist of gneiss of the well-foliated type, passing into mica schist, while submetamorphic or transition rocks, and sandstones, conglomerates, and clays, referable to the Upper Tertiary period, are largely represented. Geology.

The belt of forest along the northern border of the District contains *sāl* (*Shorea robusta*), *sissū* (*Dalbergia Sissoo*), and *tūn* (*Cedrela Toona*); the cotton-tree (*Bombax malabaricum*), *kusum* (*Schleichera trijuga*), and *khair* (*Acacia Catechu*) are also common. Bamboos thrive in the moist *tarai* tract; *sabai* grass (*Ischoemum angustifolium*) and the *narkat* reed (*Amphidonax falcata*) are also valuable products, and extensive thickets of tamarisk line the Gandak river. In the south cultivation is closer, and the crops leave room for little besides weeds, grasses, and sedges, chiefly species of *Panicum* and *Cyperus*, though on patches of waste land thickets of *sissū* very rapidly appear. The sluggish streams and lakes are filled with water-weeds, the sides being often fringed by reedy grasses, bulrushes, and tamarisk. Near villages, small shrubberies may be found containing mango, *sissū*, *Eugenia Jambolana*, various species of *Ficus*, an occasional tamarind, and a few other semi-spontaneous and more or less useful species. Both the palmyra palm (*Borassus flabellifer*) and the date-palm (*Phoenix sylvestris*) occur planted and at times self-sown, but neither in great abundance. Botany.

Tigers and leopards are found in the jungle to the extreme north, and bears are occasionally met with among the lower hill ranges in the same tract. *Nilgai* (*Boselaphus tragocamelus*) are fairly distributed over the whole District, while *sāmbār* (*Cervus unicolor*), spotted deer (*Cervus axis*), barking-deer (*Cervulus muntjac*), and antelope (*Antilope cervicapra*) are found in the hills and jungle to the north, and hog deer (*Cervus porcinus*) in the *diāras* of the Gandak. Wild hog are common everywhere. Fauna.

The mean temperature for the year is 76°; the mean maximum rises to 97° in April and May, and the mean minimum drops to 47° in December and January. The mean humidity for the year is 83 per cent., ranging from 68 in April to 92 per cent. in January. Rainfall is heavy in the submontane tract. The annual fall averages 55 inches, Climate,
tempera-
ture, and
rainfall.

including 2·7 inches in May, 10·2 in June, 13·8 in July, 13·2 in August, 9·5 in September, and 3·3 in October; less than one inch falls in each of the other months. Owing to the progress made in clearing the forests, and the extension of cultivation in the north of the District, the rainfall is decreasing, while the extremes of temperature are becoming more marked and the mean temperature is rising.

Floods. The District, which was formerly subject to destructive floods from the Gandak and Bāghmati, has been protected from the former river by a Government embankment; only a small area near the Burhī Gandak and Bāghmati rivers is now liable to inundation.

History and archaeology. Local traditions, archaeological remains, and the ruins of old-world cities point to a prehistoric past. Champāran was, in early Hindu times, a dense primeval forest, in whose solitudes Brāhman hermits studied the *Aranyakas*, which, as their name implies, were to be read in sylvan retreats. Thus the sage Vālmiki, in whose hermitage Sītā is said to have taken refuge, is alleged to have resided near the village of Sangrāmpur, so named from the famous fight which took place there between Rāma and his sons, Lava and Kusa; and the names of the *tappas* or revenue subdivisions are, with few exceptions, connected with Hindu sages. The District was included in the kingdom of Mithilā, which may have been a great seat of Sanskrit learning as early as 1000 B.C. To this period General Cunningham assigns the three rows of huge conical mounds at LAURIYĀ NANDANGARH; and there are interesting ruins at ARARĀJ and KESARIYĀ, while a fine specimen of an Asoka pillar stands at Lauriyā Nandangarh, and another Asoka pillar, known as the Rāmpurwā pillar, lies prone at Pipariyā. After the decay of Buddhism a powerful Hindu dynasty seems to have ruled from 1097 to 1322 at Simraun, in Nepāl, where extensive remains still exist. It was founded by Nānya Deva, who was followed by six of his line; the last was conquered by Hari Singh Deva, who had been driven out of Ajodhyā by the Muhammadans. His dynasty preserved its independence for more than a century later than South Bihār, which was conquered by Muhammad-i-Bakhtiyār Khiljī in 1197.

In 1765 the District passed, with the rest of Bengal, under the administration of the East India Company. It was treated as part of the neighbouring District of Sāran until 1866. In recent times the only event of importance has been the mutiny of the small garrison at SAGAULI in 1857.

The recorded population of the present area increased from 1,440,815 in 1872 to 1,721,608 in 1881 and 1,859,465 in 1891, but fell to 1,790,463 in 1901. The first six years of the last decade were lean years, and they culminated in the famine of 1897; no deaths occurred from starvation, but the fecundity of the people was diminished. Outbreaks of cholera were frequent during the decade, and fever was also very prevalent. Immigration received a severe check, and not only did new settlers cease to arrive, but many of the old immigrants returned to their homes. The climate of Champāran is the worst in Bihār, especially in the submontane tract of the Bagahā and Shikārpur *thānas*. In the whole District malarial fevers and cholera are the principal diseases. Goitre is prevalent in the neighbourhood of the Chanchawat and Dhanauti rivers; and the proportion of deaf-mutes (2.75 per 1,000 among males) exceeds that in any other Bengal District.

The principal statistics of the Census of 1901 are shown in the following table:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages.				
Motihārī .	1,518	1	1,304	1,040,599	686	— 5.4	26,545
Bettiah .	2,013	1	1,319	749,864	373	— 1.3	13,951
District total	3,531	2	2,623	1,790,463	507	— 3.7	40,496

The population is sparse in comparison with the neighbouring Districts, the density being only 507 persons per square mile, as compared with 901 in Sāran and 908 in Muzaffarpur. The most thickly populated *thānas* are Madhuban (810), Dhāka (771), and Adāpur (749), in the east of the District, where the conditions are similar to those in Muzaffarpur; but in the north-western *thānas* of Shikārpur and Bagahā, where cultivation is undeveloped and malaria very prevalent, there are only 270 and 301 persons respectively per square mile. The population is almost entirely rural, the only towns being BETTIAH (population, 24,696) and MOTIHĀRĪ, the head-quarters. Immigration to the half-reclaimed country in the north of the District formerly took place on a large scale from Gorakhpur; Sāran, and Muzaffarpur, and also from Nepāl. The language spoken is the Bhojpurī dialect of Bihārī; but Muhammadans and Kāyasths mostly talk Awadhī, and the Thārus have a dialect of their own, which is a mixture of Maithilī and Bhoj-

puri known as Madestī. The character officially and generally used for writing is Kaithī. Hindus numbered 1,523,949, or 85 per cent. of the total, and Muhammadans 264,086, or nearly 15 per cent.; the latter are considerably more numerous in Champāran than in any other Bihār District except Purnea.

Castes and
occupa-
tions.

The most numerous castes are Ahīrs or herdsmen (189,000) and Chamārs or leather-dressers (125,000). There are 85,000 Brāhmans, many of them imported by the Bettiah Rāj, 79,000 Rājputs; and 52,000 Bābhans. Koiris (84,000) and Kurmīs (99,000) are the best cultivators, Kāyasths (29,000) are the literary caste; and Nuniās (55,000), the hereditary manufacturers of saltpetre, make the best labourers. Among the aboriginal population are included the Thārus (27,000), who are almost entirely confined to the two frontier *thānas* of Shikārpur and Bagahā. These people live in scattered settlements in the malarious *tarai* along the foot of the Himālayas, from the Kosi river in Purnea almost as far as the Ganges. Originally of nomadic habits, they appear to have settled down as honest and industrious cultivators, utilizing the water of the hill streams to irrigate their scanty patches of rice cultivation. Their religion is a veneer of Hinduism over Animism. A gipsy branch of the Magahiya sub-caste of Doms has acquired an evil reputation in Champāran, as they are inveterate thieves and housebreakers, using knives and clubs to defend themselves when interfered with. Since 1882 attempts have been made to reclaim them, and they have been collected in two settlements where they have been provided with land for cultivation. Among the Muhammadans, Jolāhās (74,000) and Shaikhs (72,000) are the most numerous communities. Of 205 Europeans most are engaged in the indigo industry. Of the total population, 80 per cent. are dependent upon agriculture, and 6 per cent. on industrial avocations; 8 per cent. are classed as general labourers; while less than one per cent. are engaged in commerce.

Christian
missions.

Christians number 2,417, including 2,180 native converts. They are nearly all Roman Catholics, and are to be found in the Bettiah subdivision, where two Roman Catholic missions are at work, one of them being a lineal descendant of the old Lhāsa mission, which, when ejected from Tibet, retreated first to Nepāl and afterwards to this District. A Protestant mission, styled 'The Regions Beyond Mission,' has been opened at Motihāri.

General
agricul-

North of the Burhī Gandak hard clay soils, locally called *bāngar*, predominate. These are particularly suitable for rice

cultivation, but they require irrigation ; where autumn rice is grown, it is followed by spring crops of oilseeds and pulses, but if winter rice is grown, there is no second crop. In some parts of this northern tract a thin loam is also found, which will not grow rice, but bears crops of maize, barley, gram, pulses, and oilseeds ; and in others, a sandy soil fit only for maize and inferior millets. South of the Burhī Gandak uplands predominate, except in the Kesariyā and Gobindganj *thānas*, where rice is grown in the marshes. The soil in the uplands is generally a light loam, and bears millets, pulses, wheat and barley, oilseeds, and indigo.

The chief agricultural statistics for 1903-4 are shown below, in square miles :—

Chief agricultural statistics and principal crops.

Subdivision	Total.	Cultivated.	Irrigated from canals.	Cultivable waste.
Motīhāri . .	1,518	1,184	2	180
Bettiah . .	2,013	1,041	...	416
Total	3,531	2,225	2	596

A conspicuous feature is the large area of cultivable waste land, chiefly in the two north-western *thānas* of Bagahā and Shikārpur. Its reclamation is proceeding rapidly, in spite of the prevalence of malaria, which saps the energy of the cultivators.

Owing to the comparatively sparse population, food-crops occupy only 83 per cent. of the cultivated area. Rice, which is more generally grown than in Muzaffarpur or Sāran, extends over more than half the cultivated area ; two-thirds of this area is occupied by the winter crop, and the rest by early rice. The extensive cultivation of the latter is remarkable, and in Adāpur it actually exceeds the area under winter rice. Barley is the next food-grain of importance, followed by maize, wheat, and pulses. The non-food crops are indigo, oilseeds, thatching grass, poppy, and sugar-cane. Indigo is losing ground owing to the competition of the synthetic dye. As in other parts of Bihār, poppy is cultivated under a system of Government advances. The total area under poppy in 1903-4 was about 50,000 acres and the out-turn of opium 300 tons. Cow-dung and indigo refuse are used as manure for special crops, such as sugar-cane, tobacco, poppy, and indigo. Little advantage has been taken of the Land Improvements Act, but in the famine of 1897 a sum of 2.2 lakhs was advanced under the Agriculturists' Loans Act.

Cattle. There is abundance of pasture in Bagahā and Shikārpur, which attracts great herds of cattle from the southern *thānas* and from adjoining Districts. Each family owns, on the average three head of cattle. Goats also are numerous, and there are a few sheep, horses and ponies, mules and donkeys. Large cattle fairs are held annually at Madhuban and Bettiah.

Irrigation. Only 2 per cent. of the cultivated area is irrigated. The hill streams in the north afford facilities for irrigation; the water is carried along channels dug parallel with their beds, and in dry years weirs are thrown across them. A channel was dug in the famine of 1897, along which the water of the Masān stream is conducted for 20 miles; it is managed by the District officials. The Madhuban Canal, which takes off from a permanent dam in the Tiar river, is a protective canal 6.2 miles in length; it was constructed by the Madhuban *samindār* and has been bought by Government, but it is not yet fully utilized. The TRIBENĪ CANAL is under construction, and a small canal is also being made to carry the water of the Lālbeghiā river to the south of the Dhāka *thāna*. In years of drought these streams are often dammed by the Nepālese before they reach the District. In the south irrigation wells are occasionally dug; but there is a prejudice against them, as it is supposed that loam soils once irrigated lose the capacity to retain moisture.

Minerals. Gold is sometimes washed in minute quantities from the Gandak river, and from the Pāchnad, Harhā, Bhabsa, and Sonāha hill streams in the north of the District. Beds of *kankar*, or nodular limestone, are found in workable quantities at Ararāj, and near Lauriyā, and along the banks of the Harhā river in the Bagahā *thāna*; it is used for road-metal and for burning into lime. Saliferous earth is found in all parts of the District, and a special caste, the Nuniās, earn a scanty livelihood by extracting saltpetre. Sangrāmpur is the head-quarters of the industry. The out-turn in 1903-4 was 30,000 maunds.

Arts and manufactures. The indigenous manufactures are confined to the weaving of coarse cotton cloth, blankets and rugs, and pottery work. Sugar-refining, which was introduced from the neighbouring District of Gorakhpur, chiefly flourishes in the Bettiah subdivision; it has recently been started at Sirāha factory on a large scale with modern machinery. Indigo is still the most important manufacture in the District. Colonel Hickey, the pioneer of indigo cultivation in Champāran, built a factory at Bāra in 1813. The Rājpur and Tarkoliā concerns were started by Messrs. Moran & Company, and in 1845 Colonel Taylor built

Sirāha. Sugar, however, was the prominent industry until about 1850. A peculiar feature of the indigo industry in Champāran is the permanent hold which the planters have on the land. In 1876 the Bettiah Rāj was deeply involved in debt, and a sterling loan of nearly 95 lakhs was floated on the security of permanent leases of villages which were granted by the estate to indigo planters. The result is that, although a bare 6 per cent. of the cultivated area is actually sown with indigo, the planters are in the position of landlords over nearly half the District. There are 20 head factories with 48 out-works. Indigo is either cultivated by the planter through his servants under the *sirāt* or home-farm system, or else by tenants under what is known as the *āsāmiwār* system (*āsāmi* means a tenant); in either case the plant is cut and carted by the planter. When the crop is grown by tenants, the planter supplies the seed and occasionally also gives advances to the tenant, which are adjusted at the end of the year. The plant, when cut, is fermented in masonry vats, and oxidized either by beating or by currents of steam. The dye thus precipitated is boiled and dried into cakes. In 1894, which was a bumper season, the out-turn was 19,040 cwts., valued at 65.45 lakhs; in 1903-4 it was only 10,300 cwts., valued at 20.20 lakhs. Not less than 33,000 labourers are employed daily during the manufacturing season.

Champāran exports indigo, oilseeds, grain, and a little sugar, Commerce and imports salt, piece-goods, kerosene oil, coal, grain, and tobacco. The indigo and oilseeds go to Calcutta for shipment oversea, and the grain is exported to the neighbouring Bihār Districts and to the United Provinces. The imports come from Calcutta, except the grain, which is grown in the United Provinces. The main trade route to Nepāl lies through Champāran, and traffic is registered on the frontier. The bulk of the trade passes through Raxaul, the terminus of the Sagauli-Raxaul branch railway. The railways are the main arteries of commerce; but the Gandak and the Burhī Gandak also carry much traffic, the principal river marts being Gobindganj, Barharwā, Mānpur, and Bagahā. The other trade centres are Bettiah, Motihāri, Chainpatīā, Chāpkāhia, Rāmgarwa, Kesariyā, and Madhuban. The traders are Mārwarīs, Kalwārs, and Agraharis, and to a small extent Muhammadans.

The Tirhut State Railway was opened to Bettiah in August, Railways 1883. It is now known as the Bettiah branch of the Bengal and roads. and North-Western Railway, and connects with the East Indian Railway by a ferry across the Ganges at Mokameh;

a branch from Sagauli runs to Raxaul on the Nepāl frontier. Including 242 miles of village tracks, the District contains 1,303 miles of road, of which only 15 miles are metalled. The roads commercially most important are those which lead from the Nepāl border to the railway and to the Gandak river. The District board has not sufficient funds to maintain the roads in good repair. Bridges are few in number, but the income from ferries is considerable.

Famine.

Champāran is very liable to famine. It suffered severely in the great famine of 1770, which is said to have killed one-third of the entire population of Bengal. In 1866 the north of the District was seriously afflicted, and the relief afforded being insufficient, the mortality reached the appalling total of 50,000 persons. The next famine was in 1874, when distress was most acutely felt in the Bagahā, Shikārpur, and Adāpur *thānas*. Relief operations were undertaken on a lavish scale; nearly 10 lakhs was spent in the District and 28,000 tons of grain were imported. There was on this occasion no mortality from starvation. In 1897 occurred the greatest famine of the century, brought about by deficient and unfavourably distributed rainfall in 1895 and 1896, and intensified by extraordinarily high prices, consequent on similar causes operating over a great part of India. The out-turn of early rice in 1896 was very poor, and there was an almost total failure of the winter rice crop. The most seriously affected parts were the Rām-nagar and Shikārpur *thānas*, where both crops failed completely. Relief works were started in November, 1896. The Government expenditure amounted to nearly 25 lakhs, of which over one-half was spent in wages and a quarter in gratuitous relief, while 3 lakhs was advanced as loans. The number of individuals employed, reckoned in terms of one day, was 18,000,000, or rather more than in 1874.

District subdivisions and staff.

For administrative purposes, the District is divided into two subdivisions, with head-quarters at MOTĪHĀRI and BETTIAH. The revenue work at Motihāri is carried on by the Collector, assisted by 3 Assistant and Deputy-Collectors, and at Bettiah by the subdivisional officer and a Sub-Deputy-Collector.

Civil and criminal justice.

The District and Sessions Judge, who is also Judge of Muzaffarpur, is assisted in the disposal of civil work by two Munsifs stationed at Motihāri. The criminal courts include those of the Sessions Judge, the District Magistrate, and the Deputy and Assistant Magistrates at Motihāri and Bettiah. Burglary and cattle-thefts are common; dacoits from Nepāl occasionally make raids into the District.

The earliest settlement was made in 1582 by Todar Mal, Akbar's finance minister; but the area measured was only 148 square miles, as compared with 3,200 square miles now assessed, and the revenue fixed was 1.38 lakhs. It is noteworthy, however, that Todar Mal's revenue rate was as high as Rs. 1-6 per acre, or four times what it is now. The revenue was altered in 1685, and again in 1750, with the result that, when the East India Company obtained possession of the District in 1765, it slightly exceeded 2 lakhs. The revenue dwindled year by year until 1773, when it was only 1.39 lakhs; but in 1791 the Decennial Settlement raised it to 3.51 lakhs, and two years later the District was permanently settled for 3.86 lakhs. The subsequent increase to 5.15 lakhs has been due to the resumption, between 1834 and 1841, of lands held without payment of revenue under invalid titles. The current demand in 1903-4 was 5.15 lakhs, payable by 1,247 estates. This gives an incidence of only R. 0-5-6 per cultivated acre, and represents 17 per cent. of the rental of the District, and only 1.4 per cent. of the estimated value of the gross agricultural produce. The BETTIAH RĀJ, the Rāmnagar Rāj, and the Madhuban Bābu own between them nearly the entire District. With the exception of seven estates paying Rs. 840, the District is permanently settled.

Between 1892 and 1899 the whole District, with the exception of a hilly tract to the north, was cadastrally surveyed on the scale of 16 inches to the mile, and a complete record-of-rights was framed. This has enormously strengthened the position of the cultivator, and has done much to protect him in the peaceful occupation of his holding, and from oppressive enhancement of his rent. The average size of a ryot's holding is 5.19 acres, the largest holdings being found in the sparsely populated tracts in the north-west. Owing to the abundance of waste land, rents are low, the average rate per acre being only Rs. 1-13-9. Ryots at fixed rates pay on the average Rs. 1-2-3, settled and occupancy ryots Rs. 1-14-1, and non-occupancy ryots Rs. 1-12-10. Produce rents are paid for only $4\frac{1}{2}$ per cent. of the area held by occupancy ryots, but of the area leased to non-occupancy and under ryots 22 and 65 per cent. respectively are so held. No fewer than 86 per cent. of the ryots have a right of occupancy in their lands, and they hold 83 per cent. of the cultivated area. It has been decided by the civil courts that a ryot in Champāran cannot transfer his occupancy right in a holding without the consent of the landlord; but in point of fact an unusually large number

of transfers are taking place, and nearly half the purchasers are money-lenders.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1	1903-4.
Land revenue . . .	5,13	5,14	5,17	5,15
Total revenue . . .	8,80	10,31	10,84	11,14

Local and municipal government. Outside the MOTIHĀRI and BETTIAH municipalities, local affairs are managed by a District board. Its income in 1903-4 was Rs. 1,55,000, including Rs. 86,000 derived from rates; and the expenditure was Rs. 1,34,000, of which Rs. 71,000 was spent on public works and Rs. 32,000 on education.

Police and jails. The District contains 9 police stations and 14 outposts. The police force under the District Superintendent in 1903 comprised 2 inspectors, 35 sub-inspectors, 24 head constables, 323 constables, and 48 town *chaukidārs*. The rural police consisted of 136 *daffadārs* and 2,405 *chaukidārs*. A small number of *chaukidārs* are organized into a special frontier patrol, with the object of preventing the inroads of bands of robbers from Nepāl. The District jail at Motihāri has accommodation for 356 prisoners, and a subsidiary jail at Bettiah for 26.

Education. Education is backward in Champāran; only 2.3 per cent. of the population (4.5 males and 0.1 females) could read and write in 1901. The number of pupils under instruction was 21,803 in 1892-3 and 19,785 in 1900-1. In 1903-4, 18,627 boys and 807 girls were at school, being respectively 14.0 and 0.5 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 799: namely, 11 secondary, 693 primary, and 95 special schools. The expenditure on education was Rs. 86,000, of which Rs. 10,000 was met from Provincial funds, Rs. 31,000 from District funds, Rs. 1,300 from municipal funds, and Rs. 25,000 from fees. The educational institutions include a third-grade *gurū*-training school where teachers are trained, and 16 lower primary schools for the education of aboriginal or depressed castes or tribes, 3 being for Magahiya Doms and the remainder for the benefit of the Thārus.

Medical. In 1903 the District contained 7 dispensaries, of which 3 had accommodation for 68 in-patients. The cases of 74,000 out-patients and 1,028 in-patients were treated, and 3,662 operations were performed. The expenditure was Rs. 24,000.

and the income Rs. 31,000, of which Rs. 700 was derived from Government contributions, Rs. 4,000 each from Local and from municipal funds, and Rs. 17,000 from subscriptions.

Vaccination is compulsory only in the two municipal towns. Elsewhere it is very backward; and in 1903-4 only 50,000 persons, or 28.6 per 1,000 of the population, were successfully vaccinated. Vaccination.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xiii (1877); C. J. Stevenson-Moore, *Settlement Report* (Calcutta, 1900).]

Motihāri Subdivision.—Head-quarters subdivision of Champāran District, Bengal, lying between $26^{\circ} 16'$ and $27^{\circ} 1' N.$ and $84^{\circ} 30'$ and $85^{\circ} 18' E.$, with an area of 1,518 square miles. The subdivision consists of an alluvial tract traversed by the Sikrāna river, in which the land is level, fertile, and highly cultivated. The population in 1901 was 1,040,599, compared with 1,099,600 in 1891. The slight decrease was due to the famine of 1897, which stimulated emigration and diminished the fecundity of the people. The density is 686 persons per square mile, or nearly twice as high as in the Bettiah subdivision. It contains one town, MOTIHĀRI (population, 13,730), the head-quarters; and 1,304 villages. Interesting archaeological remains are found at ARARĀJ and KESARIYĀ. SAGAULI was the scene of an outbreak in the Mutiny.

Bettiah Subdivision.—Northern subdivision of Champāran District, Bengal, lying between $26^{\circ} 36'$ and $27^{\circ} 31' N.$ and $83^{\circ} 50'$ and $84^{\circ} 46' E.$, with an area of 2,013 square miles. The southern portion of the subdivision is a level alluvial plain, but towards the north-west the surface becomes more undulating. Here a range of low hills extends for about 20 miles; and between this and the Someswar range, which stretches along the whole of the northern frontier, lies the Dūn valley. The population in 1901 was 749,864, compared with 759,865 in 1891. The slight decrease was due to unhealthiness and a series of lean years culminating in the famine of 1897. The density is only 373 persons per square mile, as compared with 507 for the whole District. The head-quarters are at BETTIAH (population, 24,696), and there are 1,319 villages. Roman Catholic missions are at work at Bettiah and Chuhāri. The latter owes its origin to some Italian missionaries who founded a mission at Lhāsa in 1707. Compelled to leave Tibet in 1713, they settled in Nepāl under the Newār kings; but when the Gurkhas came into power, they had to fly and take refuge at Chuhāri, where some land was granted to them.

Many of the present flock are descendants of the original fugitives from Nepāl. Interesting archaeological remains are found at LAURIYĀ NANDANGARH and Pipariyā. The greater part of the subdivision is included in the BETTIAH RĀJ, much of which is held by European indigo planters on permanent leases. Rāmnagar, a village 13 miles north-west of Bettiah, is the residence of the Rājā of Rāmnagar, whose title was conferred by Aurangzeb in 1676 and confirmed by the British Government in 1860. He owns extensive forests, which are leased to a European capitalist. The TRIBENĪ CANAL, which is under construction, will do much to protect this subdivision from famine, to which it has always been acutely liable.

Bettiah Rāj.—A great estate in the subdivision of the same name in Champāran District, Bengal, with an area of 1,824 square miles. The property was originally acquired in the middle of the seventeenth century by a successful military adventurer, Rājā Ugra Sen Singh, a Bābhan or Bhuinhār. In 1765 Rājā Jugal Kishor Singh, who was then in possession, fell into arrears of revenue and rebelled against the British Government. He was defeated, and the estate was taken under direct management; but all attempts to collect the revenue failed, and in 1771 he was invited to return, and received the settlement of the Majhāwa and Simraon *parganas*, the remainder of the District being given to his cousin and forming the Shiuhār Rāj. In 1791 the Decennial Settlement of the Majhāwa and Simraon *parganas* was made with Bir Kishor, Jugal Kishor's son, and they now constitute the Bettiah Rāj. The title of Mahārājā Bahādur was conferred on the next heir, Anand Kishor, in 1830. The estate has been under the management of the Court of Wards since 1897. The land revenue and cesses due from the estate amount to 5 lakhs, and the collections of rents and cesses to nearly 18 lakhs. A great portion of the estate is held on permanent leases by European indigo planters.

Ararāj.—Village in the head-quarters subdivision of Champāran District, Bengal, situated in 26° 34' N. and 84° 40' E. Population (1901), 1,107. About a mile south-west of the village stands a lofty stone pillar, inscribed with Asoka's edicts, in clear and well-preserved letters. The pillar is fashioned from a single block of polished sandstone, and stands 36.5 feet high with a diameter of 41.8 inches at the base and of 37.6 inches at the top.

Bettiah Town.—Head-quarters of the subdivision of the same name in Champāran District, Bengal, situated in 26° 48' N.

and $84^{\circ} 30' E.$, on an old bed of the Harhā river. Population (1901), 24,696, of whom 15,795 were Hindus, 7,599 Musalmāns, and 1,302 Christians. Bettiah was constituted a municipality in 1869. The income and expenditure during the decade ending 1901-2 averaged Rs. 16,000. In 1903-4 the income was Rs. 23,000, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 16,000. A Roman Catholic mission was established about 1740 by Father Joseph Mary, an Italian missionary of the Capuchin order, who was passing near Bettiah on his way to Nepāl, when he was summoned by Rājā Dhruva Shāh to attend his daughter, who was dangerously ill. He succeeded in curing her, and the grateful Rājā invited him to stay at Bettiah and gave him a house and 90 acres of land. Bettiah is the head-quarters of the BETTIAH RĀJ, and the Mahārājā's palace is the most noteworthy building. The town contains the usual public offices; a subsidiary jail has accommodation for 26 prisoners.

Kesariyā.—Village in the head-quarters subdivision of Champāran District, Bengal, situated in $26^{\circ} 21' N.$ and $84^{\circ} 53' E.$ Population (1901), 4,466. Kesariyā contains a lofty brick mound, 1,400 feet in circumference, supporting a solid tower or *stūpa* of the same material, 62 feet high and 68 feet in diameter, which was supposed by General Cunningham to have been erected to commemorate one of the acts of Buddha. The brick tower is said to date from A. D. 200-700; but the mound is of an earlier period, being associated with the name of Rājā Ben Chakrabartti, a traditional emperor of India.

Lauriyā Nandangarh.—Village in the Bettiah subdivision of Champāran District, Bengal, situated in $26^{\circ} 59' N.$ and $84^{\circ} 25' E.$ Population (1901), 2,062. The village contains three rows of huge conical mounds, which General Cunningham believed to be the tombs of early kings, belonging to a period antecedent to the rise of Buddhism. Near these mounds stands a lion pillar inscribed with the edicts of Asoka. It is a single block of polished sandstone, 32 feet 9 inches high, the diameter tapering from 35.5 inches at the base to 26.2 inches at the top. The capital supports a statue of a lion facing the north; the circular abacus is ornamented with a row of Brāhmani geese. The pillar is now worshipped as a *linga*, and is commonly known as Bhīm Singh's *lāth* or club.

Motihāri Town.—Head-quarters of Champāran District, Bengal, situated in $26^{\circ} 40' N.$ and $84^{\circ} 55' E.$ Population (1901), 13,730. Motihāri was constituted a municipality in

1869. The income during the decade ending 1901-2 averaged Rs. 16,000, and the expenditure Rs. 14,000. In 1903-4 the income was Rs. 22,000, of which Rs. 8,000 was derived from a tax on houses and lands, and Rs. 3,000 from a municipal market; and the expenditure was Rs. 17,000. The town is pleasantly situated on the east bank of a lake, and contains the usual public offices, a jail, and a school. The jail has accommodation for 356 prisoners; the chief industries carried on are oil-pressing, *dari*-weaving, net-making, and the manufacture of string money-bags. Motihāri is the head-quarters of a troop of the Bihār Light Horse.

Sagauli.—Village in the head-quarters subdivision of Champāran District, Bengal, situated in $26^{\circ} 47' N.$ and $84^{\circ} 45' E.$, on the road to Nepāl. Population (1901), 5,611. In the Mutiny of 1857, the 12th Regiment of Irregular Horse, which was stationed here, mutinied and massacred the commandant, Major Holmes, his wife and children, and all the Europeans in the cantonment.

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and river
system.

Muzaffarpur District.—District in the Patna Division of Bengal, lying between $25^{\circ} 29'$ and $26^{\circ} 53' N.$ and $84^{\circ} 53'$ and $85^{\circ} 50' E.$, with an area of 3,035¹ square miles. It is bounded on the north by the State of Nepāl; on the east by Darbhanga District; on the south by the Ganges, which divides it from Patna; and on the west by Champāran and the Gandak river, which separates it from Sāran.

The District is an alluvial plain, intersected with streams and for the most part well watered. It is divided by the Bāghmati and Burhī or Little Gandak rivers into three distinct tracts. The country south of the latter is relatively high; but there are slight depressions in places, especially towards the south-east, where there are some lakes, the largest of which is the Tāl Barailā. The *doāb* between the Little Gandak and the Bāghmati is the lowest portion of the District, and is liable to frequent inundations. Here too the continual shifting of the rivers has left a large number of semicircular lakes. The area north of the Bāghmati running up to the borders of Nepāl is a low-lying marshy plain, traversed at intervals by ridges of higher ground. Of the two boundary streams, the GANGES requires no remark. The other, the Great GANDAK, which joins the Ganges opposite Patna, has no tributaries in this part of its course; in fact, the drainage sets away from it, and the country is protected from inundation by artificial embank-

¹ The area shown in the *Census Report* of 1901 is 3,004 square miles. The figures in the text are those ascertained in the recent survey operations.

ments. The lowest discharge of water into the Ganges towards the end of March amounts to 10,391 cubic feet per second; the highest recorded flood volume is 266,000 cubic feet per second. The river is nowhere fordable; it is full of rapids and whirlpools, and is navigable with difficulty. The principal rivers which intersect the District are the Little Gandak, the Bāghmati, the Lakhandai, and the Bayā. The Little Gandak (also known as Harhā, Sikrāna, Burhī Gandak, or the Muzaffarpur river) crosses the boundary from Champāran, 20 miles north-west of Muzaffarpur town, and flows in a south-easterly direction till it leaves the District near Pūsa, 20 miles to the south-east; it ultimately falls into the Ganges opposite Monghyr. The Bāghmati, which rises near Kātmāndu in Nepāl, enters the District 2 miles north of Maniāri Ghāt, and, after flowing in a more or less irregular southerly course for some 30 miles, strikes off in a south-easterly direction almost parallel to the Little Gandak, and, crossing the District, leaves it near Hātha, 20 miles east of Muzaffarpur. Being a hill stream and flowing on a ridge, it rises very quickly after heavy rains and sometimes causes much damage by overflowing its banks. A portion of the country north of Muzaffarpur town is protected by the Turkī embankment. In the dry season the Bāghmati is fordable and in some places is not more than knee-deep. Its tributaries are numerous: the Adhwāra or Little Bāghmati, Lāl Bakyā, Bhurengi, Lakhandai, Dhaus, and Jhīm. Both the Bāghmati and Little Gandak are very liable to change their courses. The Lakhandai enters the District from Nepāl near Itharwa, 18 miles north of Sītāmarhi. It is a small stream until it has been joined by the Sauran and Bāsīād. Flowing south it passes through Sītāmarhi, where it is crossed by a fine bridge, and then, continuing in a south-easterly direction, joins the Bāghmati 7 or 8 miles south of the Darbhanga-Muzaffarpur road, which is carried over it by an iron girder-bridge. The stream rises and falls very quickly, and its current is rapid. The Bayā issues out of the Gandak near Sāhibganj (34 miles north-west of Muzaffarpur town), and flows in a south-easterly direction, leaving the District at Bājitpur, 30 miles south of Muzaffarpur town. The head of the stream is apt to silt up, but is at present open. The Bayā is largely fed by drainage from the marshes, and attains its greatest height when the Gandak and the Ganges are both in flood; it joins the latter river a few miles south of Dalsingh Sarai in Darbhanga District.

The most important of the minor streams are the Purāna Dar

Bāghmati (an old bed of the Bāghmati stretching from Māllāhi on the frontier to Belānpur Ghāt, where it joins the present stream) and the Adhwāra. These flow southwards from Nepāl, and are invaluable for irrigation in years of drought, when numerous dams are thrown across them. The largest sheet of water in the District is the Tāl Barailā in the south ; its area is about 20 square miles, and it is the haunt of innumerable wild ducks and other water-fowl.

Geology. The soil of the District is old alluvium ; beds of *kankar* or nodular limestone of an inferior quality are occasionally found.

Botany. The District contains no forests ; and except for a few very small patches of jungle, of which the chief constituents are the red cotton-tree (*Bombax malabaricum*), *khair* (*Acacia Catechu*), and *sissū* (*Dalbergia Sissoo*), with an undergrowth of euphorbiaceous and urticaceous shrubs and tree weeds, and occasional large stretches of grass land interspersed with smaller spots of *ūsar*, the ground is under close cultivation, and besides the crops carries only a few field-weeds. Near villages small shrubberies may be found containing mango, *sissū*, *Eugenia Jambolana*, various species of *Ficus*, an occasional tamarind, and a few other semi-spontaneous and more or less useful species. The numerous and extensive mango groves form one of the most striking features of the District. Both the palmyra (*Borassus flabellifer*) and the date palm (*Phoenix sylvestris*) occur planted and at times self-sown, but neither in great abundance. The field and roadside weeds include various grasses and sedges, chiefly species of *Panicum* and *Cyperus* ; in waste corners and on railway embankments thickets of *sissū*, derived from both seeds and root-suckers, very rapidly appear. The sluggish streams and ponds are filled with water-weeds, the sides being often fringed by reedy grasses and bulrushes, with occasionally tamarisk bushes intermixed.

Fauna. The advance of civilization has driven back the larger animals into the jungles of Nepāl, and the District now contains no wild beasts except hog and a few wolves and *nilgai*. Crocodiles infest some of the rivers. Snakes abound, the most common being the *karait* (*Bungaris caeruleus*) and *gohuman* or cobra (*Naia tripudians*).

Climate, temperature, and rainfall. Dry westerly winds are experienced in the hot season, but the temperature is not excessive. The mean maximum ranges from 73° in January to 97° in April and May, and falls to 74° in December, the temperature dropping rapidly in November and December. The mean minimum varies from 49° in January to 79° in June, July, and August. The annual rain-

fall averages 46 inches, of which 7.4 inches fall in June, 12.4 in July, 11.3 in August, and 7.6 in September. Cyclonic storms are apt to move northwards into the District in the two last-named months. Humidity at Muzaffarpur is on an average 67 per cent. in March, 66 in April, and 76 in May, and varies from 84 to 91 per cent. in other months.

One of the marked peculiarities of the rivers and streams of North Bihār is that they flow on ridges raised above the surrounding country by the silt which they have brought down. Muzaffarpur District is thus subject to severe and widespread inundations from their overflow. In 1788 a disastrous flood occurred which, it was estimated, damaged one-fifth of the area sown with winter crops, while so many cattle died of disease that the cultivation of the remaining area was seriously hampered. The Great Gandak, which was formerly quite unfettered towards the east, used regularly to flood the country along its banks and not infrequently swept across the southern half of the District. From the beginning of the nineteenth century attempts were made to raise an embankment strong enough to protect the country from inundation, but without success, until in the famine of 1874 the existing embankment was strengthened and extended, thus effectually checking the incursions of the river. The tract on the south of the Bāghmati is also partially protected by an embankment first raised in 1810, but the *doāb* between the Bāghmati and the Little Gandak is still liable to inundation. Heavy floods occurred in 1795, 1867, 1871, 1883, and 1898. Another severe flood visited the north of the District in August, 1902. The town of Sitāmarhi and the *doāb* between the Little Gandak and the Bāghmati suffered severely; and it was reported that 60 lives were lost and 14,000 houses damaged or destroyed, while a large number of cattle were drowned. In Sitāmarhi itself 700 houses were damaged and 12,000 maunds of grain destroyed, and it was estimated that half of the maize crop and almost half of the *maruā* crop were lost. Muzaffarpur town, which formerly suffered severely from these floods, is now protected by an embankment. One of the most disastrous floods known in the history of Muzaffarpur occurred in 1906, when the area inundated comprised a quarter of the whole District: namely, 750 square miles and over 1,000 villages. Great distress ensued among the cultivators, and relief measures were necessitated.

In ancient times the north of the District formed part of the old kingdom of MITHILĀ, while the south corresponded to

VAISĀLĪ, the capital of which was probably at BASĀRH in the Lālganj *thāna*. Mithilā passed successively under the Pāl and the Sen dynasties, and was conquered by Muhammad-i-Bakht-yar Khilji in 1203. From the middle of the fourteenth century it was ruled by a line of Brāhman kings, until it was incorporated in the Mughal empire in 1556. Under the Mughals, Hājipur and Tirhut were separate *sarkārs*; and the town of HĀJIPUR, which was then a place of strategical importance owing to its position at the confluence of the Ganges and the Gandak, was the scene of several rebellions. After the acquisition by the British of the Diwāni of Bengal, Bihār, and Orissa in 1765, *Sūbah* Bihār was retained as an independent revenue division, and in 1782 Tirhut (including Hājipur) was made into a separate Collectorate. This was split up in 1875 into the two existing Districts of Muzaffarpur and Darbhanga. During the Mutiny of 1857 a small number of native troops at Muzaffarpur town rose, plundered the Collector's house, and attacked the treasury and jail, but were driven off by the police and decamped towards Siwān in Sāran District without causing any further disturbance.

Archaeo-
logy.

Archaeological interest centres round BASĀRH, which has plausibly been identified as the capital of the ancient kingdom of Vaisālī.

The
people.

The population of the present area increased from 2,246,752 in 1872 to 2,583,404 in 1881, 2,712,857 in 1891,* and 2,754,790 in 1901. The recorded growth between 1872 and 1881 was due in part to the defects in the first Census. The District is very healthy, except perhaps in the country to the north of the Bāghmati, which is more marshy than that to the south of it. Deaf-mutism is prevalent along the course of the Burhī Gandak and Bāghmati rivers.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Muzaffarpur .	1,221	1	1,712	1,050,027	860	- 2.3	45,871
Sitāmarhi .	1,016	1	996	986,582	971	+ 6.7	29,992
Hājipur .	798	2	1,412	718,181	900	+ 0.6	31,702
District total	3,035	4	4,120	2,754,790	908	+ 1.5	107,565

The four towns are MUZAFFARPUR, the head-quarters, HĀJĪ-

PUR, LĀLGANJ, and SĪTĀMARHI. Muzaffarpur is more densely populated than any other District in Bengal. The inhabitants are very evenly distributed; in only a small tract to the west does the density per square mile fall below 900, while in no part of the District does it exceed 1,000. Every *thāna* in the great rice-growing tract north of the Bāghmati showed an increase of population at the last Census, while every *thāna* south of that river, except Hājipur on the extreme south, showed a decrease. In the former tract population has been growing steadily since the first Census in 1872, and it attracts settlers both from Nepāl and from the south of the District. The progress has been greatest in the Sītāmarhi and Sheohar *thānas* which march with the Nepāl frontier. A decline in the Muzaffarpur *thāna* is attributed to its having suffered most from cholera epidemics, and to the fact that this tract supplies the majority of the persons who emigrate to Lower Bengal in search of work. The District as a whole loses largely by migration, especially to the metropolitan Districts, Purnea, and North Bengal. The majority of these emigrants are employed as earth-workers and *pālki*-bearers, while others are shopkeepers, domestic servants, constables, peons, &c. The vernacular of the District is the Maithili dialect of Bihār. Musalmāns speak a form of Awadhī Hindi known as Shehkoī or Musalmānī. In 1901 Hindus numbered 2,416,415, or 87·71 per cent. of the total population; and Musalmāns 337,641, or 12·26 per cent.

The most numerous Hindu castes are Ahīrs or Goālās (335,000), Bābhans (200,000), Dosādhs (187,000), Rājputs (176,000), Koiris (147,000), Chamārs (136,000), and Kurmīs (126,000); while Brāhmans, Dhānuks, Kāndus, Mallāhs, Nuniās, Tāntis, and Telis each number between 50,000 and 100,000. Of the Muhammadans, 127,000 are Shaikhs and 85,000 Jolāhās, while Dhuniās and Kunjās are also numerous. Agriculture supports 76·4 per cent. of the population, industries 6·2 per cent., commerce 0·5 per cent., and the professions 0·7 per cent.

Christians number 719, of whom 341 are natives. Four Christian missions are at work in Muzaffarpur town: the German Evangelical Lutheran Mission, founded in 1840, which maintains a primary school for destitute orphans; the American Methodist Episcopal Missionary Society, which possesses two schools; a branch of the Bettiah Roman Catholic Mission; and an independent lady missionary engaged in *zanāna* work.

General
agricul-
tural con-
ditions.

The tract south of the Little Gandak is the most fertile and richest portion of the District. The low-lying *doāb* between the Little Gandak and Bāghmati is mainly productive of rice, though *rabi* and *bhadoi* harvests are also reaped. The tract to the north of the Bāghmati contains excellent paddy land, and the staple crop is winter rice, though good *rabi* and *bhadoi* crops are also raised in parts. In different portions of the District different names are given to the soil, according to the proportions of sand, clay, iron, and saline matter it contains. Ultimately all can be grouped under four heads: *balsundar* (sandy loam); *matiyāri* (clayey soil); *bāngar* (lighter than *matiyāri* and containing an admixture of sand); and lastly patches of *ūsar* (containing the saline efflorescence known as *reh*) found scattered over the District. To the south of the Little Gandak *balsundar* prevails, in the *doāb* the soil is chiefly *matiyāri*, while north of the Bāghmati *bāngar* predominates to the east of the Lakhandai river and *matiyāri* to the west. Rice is chiefly grown on *matiyāri* soil, but it also does well in low-lying *bāngar* lands, and the finer varieties thrive on such lands. Good *rabi* crops of wheat, barley, oats, *rahar*, pulses, oilseeds, and edible roots grow luxuriantly in *balsundar* soil, and to this reason is ascribed the superior fertility of the south of the District. *Bhadoi* crops, especially maize, which cannot stand too much moisture, also prosper in *balsundar*, which quickly absorbs the surplus water. Indigo does best in *balsundar*, but *bāngar* is also suitable.

Chief agri-
cultural
statistics
and princi-
pal crops.

The chief agricultural statistics for 1903-4 are given below, in square miles:—

Subdivision	Total.	Cultivated.	Cultivable waste
Muzaffarpur . . .	1,221	1,025	76
Sitamarhi . . .	1,016	897	48
Hājipur . . .	798	619	46
Total	3,035	2,541	170

It is estimated that 1,075 square miles, or 42 per cent. of the net cultivated area, are twice cropped.

The principal food-crop is rice, grown on 1,200 square miles, of which winter rice covers 1,029 square miles. The greater part of the rice is transplanted. Other food-grains, including pulses, *khesāri*, *chāna*, *rahar*, *kodon*, peas, oats, *masurī*, *sāwān*, *kaunī*, *urd*, *mūng*, *janerā* (*Holcus sorghum*), and *kurthī* (*Dolichos biflorus*) cover 804 square miles. Barley occupies 463 square miles, a larger area than in any other

Bengal District ; *makai* or maize, another very important crop, 256 square miles ; *maruā*, 129 square miles ; wheat, 114 square miles ; gram, 68 square miles ; and miscellaneous food-crops, including *aluā* or yams, *suthnā*, and potatoes, are grown on 122 square miles. Oilseeds, principally linseed, are raised on 86 square miles. Other important crops are indigo, sugar-cane, poppy, tobacco, and thatching-grass. Muzaffarpur is, after Champāran, the chief indigo District in Bengal ; but its cultivation here, as elsewhere, is losing ground owing to the competition of the synthetic dye. European indigo planters have of late been turning their attention to other crops, in particular sugar-cane and rhea. Poppy is cultivated, as in other parts of Bihār, on a system of Government advances ; the total area under the crop in 1903-4 was 12,400 acres, and the out-turn was 35 tons of opium. Cow-dung and indigo refuse are used as manure for special crops, such as sugar-cane, tobacco, poppy, and indigo.

Cultivation is far more advanced in the south than in the north of the District ; but up to the present there appears to be no indication of any progress or improvement in the method of cultivation, except in the neighbourhood of indigo factories. Over 2 lakhs of rupees was advanced under the Agriculturists' Loans Act on the occasion of the famine of 1896, but otherwise this Act and the Land Improvement Loans Act have been made little use of.

The District has always borne a high reputation for its cattle, and the East India Company used to get draught bullocks for the Ordnance department here. Large numbers of animals are exported every year from the Sitāmarhi subdivision to all parts of North Bihār. It is said that the breed is deteriorating. In the north, floods militate against success in breeding ; and in the District as a whole, though there is never an absolute lack of food for cattle even in the driest season, the want of good pasture grounds compels the cultivator to feed his cattle very largely in his *bathān*, or cattle yard. A large cattle fair is held at Sitāmarhi in April.

The total area irrigated is 47 square miles, of which 30 are irrigated from wells, 2 from private canals, 6 from tanks or *āhars*, and 9 from other sources, mainly by damming rivers. There are no Government canals. In the north there is a considerable opening for the *pain* and *āhar* system of irrigation so prevalent in Gayā District, but the want of an artificial water-supply is not great enough to induce the people to provide themselves with it.

Minerals. *Kankar*, a nodular limestone of an inferior quality, is found and is used for metalling roads. The District is rich in saliferous earth, and a special caste, the Nuniās, earn a scanty livelihood by extracting saltpetre; 98,000 maunds of saltpetre were produced in 1903-4, the salt educed during the manufacture being 6,000 maunds.

Arts and manufactures. Coarse cloth, carpets, pottery, and mats are manufactured; *pālkis*, cart-wheels, and other articles of general use are made by carpenters in the south, and rough cutlery at Lāwārpur. But by far the most important industry is the manufacture of indigo. Indigo was a product of North Bihār long before the advent of the British, but its cultivation by European methods appears to have been started by Mr. Grand, Collector of Tirhut, in 1782. In 1788 there were five Europeans in possession of indigo works. In 1793 the number of factories in the District had increased to nine, situated at Daudpur, Saraiā Dhūli, Atharshāhpur, Kantai, Motipur, Deoria, and Bhawāra. In 1850 the Revenue Surveyor found 86 factories in Tirhut, several of which were then used for the manufacture of sugar and were subsequently converted into indigo concerns. In 1897 the Settlement officer enumerated 23 head factories, with an average of 3 outworks under each, connected with the Bihār Indigo Planters' Association, besides 9 independent factories. The area under indigo had till then been steadily on the increase, reaching in that year 87,258 acres, while the industry was estimated to employ a daily average of 35,000 labourers throughout the year. Since then, owing to the competition of artificial dye, the price of natural indigo has fallen and the area under cultivation has rapidly diminished, being estimated in 1903-4 at 48,000 acres. Though only about 3 per cent. of the cultivated area is actually sown with indigo, the planters are in the position of landlords over more than a sixth of the District. They are attempting to meet the fall in prices by more scientific methods of cultivation and manufacture, and many concerns now combine the cultivation of other crops with indigo. Indigo is cultivated either by the planter through his servants under the *zīrāt* or home-farm system, or else by tenants under what is known as the *āsāmi-wār* system (*āsāmi* means a tenant), under the direction of the factory servants; in both cases the plant is cut and carted by the planter. Under the latter system, the planter supplies the seed and occasionally also gives advances to the tenant, which are adjusted at the end of the year. The plant, when cut, is fermented in masonry vats, and oxidized either by beating or

by currents of steam. The dye thus precipitated is boiled and dried into cakes. In 1903-4 the out-turn of indigo was 11,405 maunds, valued at 15.97 lakhs.

The recent fall in prices has resulted in the revival of the manufacture of sugar. A company acquired in 1900-1 the indigo estates of Ottur (Athar) and Agrial in Muzaffarpur and Sirāha in Champāran District, for the purpose of cultivating sugar-cane. Cane-crushing mills and sugar-refining plant of the most modern type were erected at those places and also at Barhoga in Sāran. These factories are capable of crushing 75,000 tons of cane in 100 working days, and of refining about 14,000 tons of sugar during the remainder of the year. Twelve Europeans and 500 to 600 natives a day are employed in the factories during the crushing season, and 10 Europeans and many thousands of natives throughout the year on the cultivation of the estates and the manufacture of sugar. Besides this, the neighbouring planters contract to grow sugar-cane and sell it to the company. It is claimed that the sugar turned out is of the best quality, and a ready sale for it has been found in the towns of Northern India.

The principal exports are indigo, sugar, oilseeds, saltpetre, Commerce. hides, *ghaz*, tobacco, opium, and fruit and vegetables. The main imports are salt, European and Indian cotton piece-goods and hardware, coal and coke, kerosene oil, cereals, such as maize, millets, &c., rice and other food-grains, and indigo seed. Most of the exports find their way to Calcutta. The bulk of the traffic is now carried by the railway; and the old river marts show a tendency to decline, unless they happen to be situated on the line of railway, like Mehnār, Bhagwānpur, and BAIRAGNIĀ, which are steadily growing in importance. Nepāl exports to Muzaffarpur food-grains, oilseeds, timber, skins of sheep, goats, and cattle, and saltpetre; and receives in return sugar, salt, tea, utensils, kerosene oil, spices, and piece-goods. A considerable cart traffic thus goes on from and to Nepāl, and between Sāran and the north of the District. The chief centres of trade are Muzaffarpur town on the Little Gandak (navigable in the rains for boats of about 37 tons up to Muzaffarpur), Hājipur (a railway centre), Lālganj (a river mart on the Great Gandak), Sītāmarhi (a great rice mart), Bairagnīā and Sursand (grain marts for the Nepāl trade), Mehnār, Sāhibganj, Sonbarsā, Belā, Majorganj, Mahuwā, and Kantai. The trade of the District is in the hands of Mārwaris and local Baniyā castes.

The District is served by four distinct branches of the Railways.

Bengal and North-Western Railway. The first, which connects Simariā Ghāt on the Ganges with Bettiah in Champāran District, runs in a south-easterly direction through Muzaffarpur District, passing the head-quarters town. The second branch enters the District at the Sonpur bridge over the Great Gandak, passes through Hājipur, and runs eastwards to Katihār in Purnea District, where it joins the Eastern Bengal State Railway; it intersects the first branch at Bārūni junction in Monghyr District. The third runs from Hājipur to Muzaffarpur town, thus connecting the first two branches. The fourth, which leaves the first-mentioned branch line at Samāstipur in Darbhāṅgā District, enters Muzaffarpur near Kamtaul and passing through Sitāmarhi town has its terminus at Bairagnīā. Communication with that place is, however, at present kept open only during the dry season by a temporary bridge over the Bāghmati about 3 miles away, but the construction of a permanent structure is contemplated.

Roads.

The District is well provided with roads, especially with feeder-roads to the railways. Including 542 miles of village tracks, it contains in all 76 miles of metalled and 1,689 miles of unmetalled roads, all of which are maintained by the District board. The most important road is that from Hājipur through Muzaffarpur and Sitāmarhi to Sonbarsā, a large mart on the Nepāl frontier. Important roads also connect Muzaffarpur town with Darbhāṅgā, Motihāri, and Sāran, 11 main roads in all radiating from Muzaffarpur. The subdivisional head-quarters of Hājipur and Sitāmarhi are also connected by good roads with their police *thānas* and outposts. Most of the minor rivers are bridged by masonry structures, while the larger ones are generally crossed by ferries, of which there are 67 in the District. The Little Gandak close to Muzaffarpur town on the Sitāmarhi road is crossed by a pontoon bridge 850 feet in length.

Water communications.

During the rainy season, when the rivers are high, a considerable quantity of traffic is still carried in country boats along the Great and Little Gandak and Bāghmati rivers. *Sāl* timber (*Shorea robusta*) from Nepāl is floated down the two latter, and also a large number of bamboos. The Ganges on the south is navigable throughout the year, and a daily service of steamers plies to and from Goalundo.

Famine.

The terrible famine of 1769-70 is supposed to have carried off a third of the entire population of Bengal. Another great famine occurred in 1866, in which it was estimated that 200,000 people died throughout Bihār; this was especially

severely felt in the extreme north of the District. Muzaffarpur again suffered severely in the famine of 1874, when deficiency of rain in September, 1873, and its complete cessation in October, led to a serious shortness in the winter rice crop. Relief works were opened about the beginning of 1874. No less than one-seventh of the total population were in receipt of relief. There was some scarcity in 1876, when no relief was actually required; in 1889, when the rice crop again failed and relief was given to about 30,000 persons; and in 1891-2, when on the average 5,000 persons daily were relieved for a period of 19 weeks. Then came the famine of 1896-7, the greatest famine of the nineteenth century. On this occasion, owing to better communications and their improved material condition, the people showed unexpected powers of resistance. Three test works started in the Sitāmarhi subdivision in November, 1896, failed to attract labour, and it was not till the end of January that distress became in any sense acute. The number of persons in receipt of relief then rose rapidly till the end of May, when 59,000 persons with 4,000 dependants were on relief works, and 59,000 more were in receipt of gratuitous relief. The number thus aided increased to 72,000 in July, but the number of relief workers had meanwhile declined, and the famine was over by the end of September. The total expenditure on relief works was 5.64 lakhs and on gratuitous relief 4.91 lakhs, in addition to which large advances were made under the Agriculturists' Loans Act. The import of rice into the District during the famine was nearly 33,000 tons, chiefly Burma rice from Calcutta. The whole of the District suffered severely, except the south of the Hājipur subdivision, but the brunt of the distress was borne by the Sitāmarhi subdivision.

For administrative purposes the District is divided into three subdivisions, with head-quarters at MUZAFFARPUR, HAJIPUR, and SITAMARHI. The staff subordinate to the District Magistrate-Collector at head-quarters consists of a Joint-Magistrate, an Assistant Magistrate, and nine Deputy-Magistrate-Collectors, while the Hājipur and Sitāmarhi subdivisions are each in charge of an Assistant Magistrate-Collector assisted by a Sub-Deputy-Collector. The Superintending Engineer and the Executive Engineer of the Gandak division are stationed at Muzaffarpur town.

The civil courts are those of the District Judge (who is also Civil and Judge of Champāran), three Sub-Judges and two Munsifs at Muzaffarpur, and one Munsif each at Sitāmarhi and Hājipur.

Criminal courts include those of the District and Sessions Judge and District Magistrate, and the above-mentioned Joint, Assistant, and Deputy-Magistrates. When the District first passed under British rule it was in a very lawless state, overrun by hordes of banditti. This state of affairs has long ceased. The people are, as a rule, peaceful and law-abiding, and heinous offences and crimes of violence are comparatively rare.

Land
revenue.

At the time of the Permanent Settlement in 1793 the total area of the estates assessed to land revenue in Tirhut was 2,476 square miles, or 40 per cent. only of its area of 6,343 square miles, and the total land revenue was 9.84 lakhs, which gives an incidence of 9 annas per acre; the demand for the estates in Muzaffarpur District alone was 4.36 lakhs. In 1822 operations were undertaken for the resumption of invalid revenue-free grants, the result of which was to add 6.77 lakhs to the revenue roll of Tirhut, of which 3.18 lakhs fell to Muzaffarpur. Owing to partitions and resumptions, the number of estates in Tirhut increased from 1,331 in 1790, of which 799 were in Muzaffarpur, to 5,186 in 1850. Since that date advantage has been taken of the provisions of the partition laws to a most remarkable extent, and by 1904-5 the number of revenue-paying estates had risen to no less than 21,050, a larger number than in any other Bengal District. Of the total, all but 49 with a demand of Rs. 16,735 were permanently settled. The total land revenue demand in the same year was 9.78 lakhs. Owing to the backward state of Tirhut at the time of the Permanent Settlement, the incidence of revenue is only R. 0-9-6 per cultivated acre.

A survey and preparation of a record-of-rights for Muzaffarpur and Champāran Districts, commenced in 1890-1 and successfully completed in 1899-1900, is important as being the first operation of the kind which was undertaken in Bengal for entire Districts which came under the Permanent Settlement. The average size of a ryot's holding in Muzaffarpur was found to be 1.97 acres, and 82 per cent. of them were held by occupancy and settled ryots. Such ryots almost always pay rent in cash, but one-fifth of the non-occupancy ryots and three-fifths of the under-ryots pay produce rents. These are of three kinds, *batai*, *bhaoli*, and *mankhap*. In the first case the actual produce is divided, generally in equal proportions, between the tenant and the landlord; in the second the crop is appraised in the field and the landlord's share paid in cash or grain; while in the third the tenant agrees to pay so many maunds of grain per *bigha*. The average rate of rent per acre

for all clases of ryots is Rs. 4-0-11. Ryots holding at fixed rates average Rs. 2-11-11; occupancy ryots, Rs. 3-12-3; non-occupancy ryots, Rs. 4-9-6; and under-ryots, Rs. 4-5-8 per acre. The rent, however, varies not only with the character and situation of the land, but also according to the caste and position of the cultivator, a tenant of a high caste paying less than one of lower social rank. Rents are higher in the south than in the north, where the demand for land has developed at a comparatively recent date. The highest rents of all are paid in the neighbourhood of Hājīpur, where poppy, tobacco, potatoes, &c., are grown on land which is never fallow and often produces four crops a year.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	9,75	9,87	9,77	9,77
Total revenue . .	17,59	16,94	21,91	22,17

Outside the municipalities of MUZAFFARPUR, HĀJĪPUR, Local and LĀLGANJ, and SĪTĀMARHĪ, local affairs are managed by the District board, with subordinate local boards in each sub-division. In 1903-4 its income was Rs. 3,31,000, of which Rs. 1,83,000 was derived from rates; and the expenditure was Rs. 3,60,000, the chief item being Rs. 2,69,000 expended on public works.

The most important public works are the Tirhut embankment on the left bank of the Great Gandak, and the Turkī embankment on the south bank of the Bāghmati. The Gandak embankment, which runs for 52 miles from the head of the Bayā river to the confluence of the Gandak and Ganges, and protects 1,250 square miles of country, is maintained by contract. On the expiry of the first contract in 1903, a new contract for its maintenance for a period of twenty years at a cost of 2.08 lakhs was sanctioned by Government. The Turkī embankment, originally built in 1810 by the Kantai indigo factory to protect the lands of that concern, was acquired by Government about 1870. It extends from the Turkī weir for 26 miles along the south bank of the Bāghmati, and protects 90 square miles of the *doāb* between that river and the Little Gandak. In 1903-4 Rs. 2,200 was spent on its maintenance.

The District contains 22 police stations and 14 outposts.

Police and jails. The force subordinate to the District Superintendent consists of 3 inspectors, 28 sub-inspectors, 47 head constables, and 432 constables. The rural police force is composed of 238 *daffadārs* and 4,735 *chaukidārs*. A District jail at Muzaffarpur town has accommodation for 465 prisoners, and subsidiary jails at Hājipur and Sitāmarhi for 38.

Education. The standard of literacy, though higher than elsewhere in North Bihār, is considerably below the average for Bengal, only 3.9 per cent. of the population (7.8 males and 0.3 females) being able to read and write in 1901. The number of pupils under instruction, which was 24,000 in 1880-1, fell to 23,373 in 1892-3, but increased to 29,759 in 1900-1. In 1903-4, 35,084 boys and 1,843 girls were at school, being respectively 17.7 and 0.85 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,520: namely, one Arts college, 20 secondary, 1,013 primary, and 486 special schools. The expenditure on education was 1.55 lakhs, of which Rs. 11,000 was met from Provincial funds, Rs. 53,000 from District funds, Rs. 3,000 from municipal funds, and Rs. 57,000 from fees. The most important institutions are the Bhuinhār Brāhman College and the Government District school at Muzaffarpur town.

Medical. In 1903 the District contained five dispensaries, of which three had accommodation for 62 in-patients. The cases of 72,000 out-patients and 800 in-patients were treated, and 4,000 operations were performed. The expenditure was Rs. 13,000, of which Rs. 900 was met from Government contributions, Rs. 5,000 from Local and Rs. 4,000 from municipal funds, and Rs. 3,000 from subscriptions. Besides these, two private dispensaries are maintained, one at Baghi in the head-quarters subdivision and the other at Parihar in the Sitāmarhi subdivision, by the Darbhanga Rāj.

Vaccination. Vaccination is compulsory only in municipal areas. In 1903-4 the number of persons successfully vaccinated was 87,000, representing 32 per 1,000 of the population, or rather less than the average for Bengal.

[L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1907); C. J. Stevenson-Moore, *Settlement Report* (Calcutta, 1900).]

Muzaffarpur Subdivision.—Head-quarters subdivision of Muzaffarpur District, Bengal, lying between 25° 54' and 26° 28' N. and 84° 53' and 85° 45' E., with an area of 1,221 square miles. It is an alluvial tract bounded on the west by the Great Gandak and intersected by the Bāghmati and Little Gandak, flowing in a south-easterly direction. The population

was 1,050,027 in 1901, compared with 1,074,382 in 1891, the density being 860 persons per square mile. The slight decline is due partly to the Muzaffarpur *thāna* having suffered from cholera epidemics, and partly to the fact that it supplies a large number of emigrant labourers to Lower Bengal. Moreover, the *doāb* between the Bāghmati and the Little Gandak is liable to frequent inundations. The subdivision contains one town, MUZAFFARPUR (population, 45,617), the head-quarters; and 1,712 villages.

Sītāmarhi Subdivision.—Northern subdivision of Muzaffarpur District, Bengal, lying between $26^{\circ} 16'$ and $26^{\circ} 53'$ N. and $85^{\circ} 11'$ and $85^{\circ} 50'$ E., with an area of 1,016 square miles. The subdivision is a low-lying alluvial plain, traversed at intervals by ridges of higher ground. The population rose from 924,396 in 1891 to 986,582 in 1901, when there were 971 persons per square mile. In spite of the fact that it is particularly liable to crop failures and bore the brunt of the famine of 1896–7, this is the most progressive part of the District and has been growing steadily since the first Census in 1872; it attracts settlers both from Nepāl and from the south of the District. The subdivision contains one town, SĪTĀMARHI (population, 9,538), the head-quarters; and 996 villages. BAIRAGNĪĀ, the terminus of a branch of the Bengal and North-Western Railway, is an important market for the frontier trade with Nepāl. The subdivision is noted for its breed of cattle, and an important fair is held annually at Sītāmarhi town in March–April.

Hājipur Subdivision.—Southern subdivision of Muzaffarpur District, Bengal, lying between $25^{\circ} 29'$ and $26^{\circ} 1'$ N. and $85^{\circ} 4'$ and $85^{\circ} 39'$ E., with an area of 798 square miles. The subdivision is an alluvial tract, fertile and highly cultivated, containing a number of swampy depressions in the south-east. The population rose from 714,079 in 1891 to 718,181 in 1901, when there were 900 persons per square mile. It contains two towns, HĀJĪPUR (population, 21,398) the head-quarters, and LĀLGANJ (11,502); and 1,412 villages. The chief trading centres are Hājipur at the confluence of the Gandak with the Ganges, and Lālganj on the Gandak. BASĀRH is of interest as the probable site of the capital of the ancient kingdom of Vaisālī. Hājipur town figured conspicuously in the history of the struggles between Akbar and the rebellious Afghān governors of Bengal.

Bairagnīā.—Village in the Sītāmarhi subdivision of Muzaffarpur District, Bengal, situated in $26^{\circ} 44'$ N. and $85^{\circ} 20'$ E.,

on the east bank of the Lal Bakyā river, on the Nepāl frontier. Population (1901), 2,405. Bairagnīā, which is the terminus of a branch of the Bengal and North-Western Railway, is a large grain and oilseed dépôt of growing importance, where the dealers of the plains meet the hillmen and the Nepāl trade changes hands.

Basārḥ.—Village in the Hājipur subdivision of Muzaffarpur District, Bengal, situated in $25^{\circ} 59'$ N. and $85^{\circ} 8'$ E. Population (1901), 3,527. Basārḥ is identified with the capital of the ancient kingdom of Vaisālī. In the sixth century B.C. a confederacy of the Lichchavis was predominant here, and was able to prevent the kingdom of Magadha from expanding on the north bank of the Ganges. Vaisālī was a great stronghold of Buddhism, and Gautama visited it three times during his life. Here was held the second Buddhist council which had so great an effect in splitting up the Buddhists into the Northern and Southern sects. The town was visited by Fa Hian and Hiuen Tsiang; the latter found it in ruins. The principal antiquarian feature of the place is a large brick-covered mound, measuring 1,580 feet by 750 and representing the remains of a vast fort or palace. In the neighbourhood is a huge stone pillar surmounted with the figure of a lion. This monolith, though locally known as Bhīm Singh's *lāth*, appears clearly to be one of the pillars erected by Asoka to mark the stages of the journey to Nepāl which he undertook in order to visit some of the holy sites of Buddhism. It bears no inscription, but can be identified with one of the Asoka pillars mentioned by Hiuen Tsiang at the site of the ancient Vaisālī.

[*Archaeological Survey Reports*, vol. xvi, pp. 89-93; and *Reports of the Archaeological Surveyor, Bengal Circle*, for 1901-2 and 1903-4.]

Hājipur Town.—Head-quarters of the subdivision of the same name in Muzaffarpur District, Bengal, situated in $25^{\circ} 41'$ N. and $85^{\circ} 12'$ E., on the right bank of the Gandak, a short distance above its confluence with the Ganges opposite Patna. Population (1901), 21,398. It is said to have been founded about 500 years ago by Hāji Ilyās, the supposed ramparts of whose fort enclosing an area of 360 *bighas* are still visible. The old town is said to have reached as far as Mehnār *thāna*, 20 miles to the east, and to a village called Gadaisarai on the north. Hājipur figured conspicuously in the history of the struggles between Akbar and the rebellious Afghān governors of Bengal, being twice besieged and cap-

tured by the imperial troops, in 1572 and again in 1574. Its command of water traffic in three directions makes the town a place of considerable commercial importance. Moreover, it lies on the main line of the Bengal and North-Western Railway, which runs west from Katihār, and it is also connected by a direct branch with Muzaffarpur town. Hājipur was constituted a municipality in 1869. The area within municipal limits is 10 square miles. The income during the decade ending 1901-2 averaged Rs. 11,000, and the expenditure Rs. 8,900. In 1903-4 the income was Rs. 13,000, mainly from a tax on houses and lands; and the expenditure was Rs. 15,000. The town contains the usual public offices; the sub-jail has accommodation for 12 prisoners. Within the area of the old fort is a small stone mosque, very plain but of peculiar architecture, attributed to Hājī Ilyās. Its top consists of three rounded domes, the centre one being the largest. They are built of horizontally placed rows of stones, each row being a circle and each circle being more contracted than the one immediately below it, until the keystone is reached, which is circular. Two other mosques and a small Hindu temple are in the town or its immediate vicinity. A *sarai* or resthouse, within the fort, enclosing a Buddhist temple, was built for the late Sir Jang Bahādur on the occasion of his visits from Nepāl.

Lālganj.—Town in the Hājipur subdivision of Muzaffarpur District, Bengal, situated in 25° 52' N. and 85° 10' E., on the east bank of the Gandak, 12 miles north-west of Hājipur town. Population (1901), 11,502. Lālganj is an important river mart, the principal exports being hides, oilseeds, and saltpetre, and the imports food-grains (chiefly rice), salt, and piece-goods. The bazar lies on the low land adjoining the river, but is protected from inundation by the Gandak embankments. The shipping *ghāt* lies a mile to the south of the town, which is connected by road with Sāhibganj, Muzaffarpur, and Hājipur. Lālganj was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 5,600, and the expenditure Rs. 4,700. In 1903-4 the income was Rs. 6,500, mainly from a tax on houses and lands; and the expenditure was Rs. 6,000.

Muzaffarpur Town.—Head-quarters of Muzaffarpur District, Bengal, situated in 26° 7' N. and 85° 24' E., on the right bank of the Little Gandak. The population, which was 38,241 in 1872, increased to 42,460 in 1881 and 49,192 in 1891, but fell in 1901 to 45,617, of whom 31,629 were Hindus

and 13,492 Muhammadans. The decrease of 9 per cent. at the last Census is to a great extent only apparent; and, but for the exclusion of one of the old wards from the municipal limits, and the temporary absence of a large number of people in connexion with marriage ceremonies, the town would probably have returned at least as many inhabitants as in 1891. Roads radiate from the town in all directions. A considerable trade is conducted by the Little Gandak, the channel of which, if slightly improved, would carry boats of 20 tons burden all the year round. Muzaffarpur was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged Rs. 70,000, and the expenditure Rs. 62,000. In 1903-4 the income was Rs. 83,000, including Rs. 30,000 derived from a tax on houses and lands, Rs. 16,000 from a conservancy rate, Rs. 3,000 from a tax on vehicles, and Rs. 13,000 from tolls. The incidence of taxation was Rs. 1-6-1 per head of the population. In the same year the expenditure also amounted to Rs. 83,000, the chief items being Rs. 3,000 spent on lighting, Rs. 3,000 on drainage, Rs. 29,000 on conservancy, Rs. 6,000 on medical relief, Rs. 11,000 on roads, Rs. 17,000 on buildings, and Rs. 1,400 on education. The town is clean, and the streets in many cases are broad and well kept. It contains, in addition to the usual public buildings, a large new hospital, a dispensary, and several schools, some of the best of which are supported by the Bihār Scientific Society and the Dharmasamāj. In 1899 a college, teaching up to the B.A. standard, was established at Muzaffarpur through the generosity of a local *zamindār*. The building is large, and the college is in a flourishing condition. The District jail has accommodation for 465 prisoners, who are employed chiefly in the manufacture of mustard oil, castor oil, *darīs*, carpets, matting, aloe fibre, coarse cloth, and dusters. Near the court buildings is a lake formed from an old bed of the river. To prevent the river from reaching it, an embankment has been thrown across the lake towards Daudpur; but in spite of this the river has cut very deeply into the high bank near the circuit-house, and, unless it changes its course, it will probably in time break through the strip of land which at present separates it from the lake. Muzaffarpur is the head-quarters of the Bihār Light Horse Volunteer Corps. At the time of the Mutiny of 1857 a small number of native troops who were stationed here rose, plundered the Collector's house, and attacked the treasury and jail, but were driven off by the police and *najibs* and

decamped towards Aliganj Sewān in Sāran District without causing any further disturbance.

Sītāmarhi Town.—Head-quarters of the subdivision of the same name in Muzaffarpur District, Bengal, situated in $26^{\circ} 35' \text{ N.}$ and $85^{\circ} 29' \text{ E.}$, on the west bank of the Lakhandai river. Population (1901), 9,538. A large fair lasting a fortnight is held here about the end of March, which is attended by people from very great distances. Sīwān pottery, spices, brass utensils, and cotton cloth form the staple articles of commerce; but the fair is especially noted for the large quantity of bullocks brought to it, the Sītāmarhi cattle being a noted breed. Tradition relates that the lovely Jānakī or Sītā here sprang to life out of an earthen pot into which Rājā Janaka had driven his ploughshare. Sītāmarhi is situated on a branch of the Bengal and North-Western Railway, and is also connected by road with the Nepāl frontier, Darbhanga, and Muzaffarpur. The Lakhandai river is spanned by a fine brick bridge. The town has a large trade in rice, *sakhwā* wood, oilseeds, hides, and Nepāl produce. The chief manufactures are saltpetre and the *janeo* or sacred thread worn by the twice-born castes. Sītāmarhi was constituted a municipality in 1882. The income during the decade ending 1901-2 averaged Rs. 9,900, and the expenditure Rs. 7,800. In 1903-4 the income was Rs. 12,000, half of which was derived from a tax* on persons (or property tax); and the expenditure was Rs. 8,000. The town contains the usual public offices; the sub-jail has accommodation for 26 prisoners.

Tirhut.—A former District of Bengal, separated in 1875 into the two Districts of MUZAFFARPUR and DARBHANGĀ. The name is still loosely applied to Muzaffarpur.

Darbhangā District.—District in the Patna Division of Bengal, lying between $25^{\circ} 28' \text{ and } 26^{\circ} 40' \text{ N.}$ and $85^{\circ} 31' \text{ and } 86^{\circ} 44' \text{ E.}$, with an area of 3,348¹ square miles. It is bounded on the north by Nepāl; on the east by Bhāgalpur District, on the south by the Ganges and the District of Monghyr; and on the west by Muzaffarpur.

The District is one large alluvial plain with a general slope from north to south, varied by a depression in the centre. It contains no hills, but is divided by its river system into three well-defined physical divisions. The first of these, starting from the south, is the tract beyond the Burhī Gandak river in

¹ The area shown in the *Census Report* of 1901 was 3,335 square miles. The area quoted in the text is that determined in the recent survey and settlement operations.

the extreme south-west of the District, comprising the *thānas* of Dalsingh Sarai and Samāstipur; it is a large block of upland, with a few *chaurs* or marshes here and there. The second division, corresponding roughly with the Wārisnagar *thāna*, consists of a small *doāb* between the Bāghmati and Burhī Gandak rivers; it is the lowest part of the District and is liable to inundation from the former river. The rest of the District, comprising the head-quarters and Madhubanī subdivisions, is a low-lying plain intersected by numerous streams and marshes, but traversed also in parts by ridges of uplands. The south-eastern portion, corresponding roughly with the *thānas* of Baherā and Ruserā, is during the rains mainly a chain of temporary lakes, joined together by the numerous beds of the hill streams which pass through the Madhubanī subdivision on their way from Nepāl to the Ganges. Large portions of this area do not dry up till well on in the cold season, and in some places communications are open for only three or four months of the year. In the Madhubanī subdivision the land is generally higher, especially in the three western *thānas* and in the south of Phulparās, which contains stretches of high land.

The District contains three main river systems: the Ganges, the Little Gandak, and the Kamlā-Tiljūgā. The Ganges, however, skirts it for only 20 miles; and the only stream of any importance which joins it direct and not by way of the other river systems is the Bayā, an overflow of the Great Gandak, which flows for a short distance across the extreme south-east corner of the District. The Burhī or Little Gandak is an important river throughout its course in Champāran, Muzaffarpur, Darbhanga, and North Monghyr. In all these Districts it marks a clearly defined division of the country. It enters Darbhanga District near Pūsa and, after flowing past Samāstipur, leaves it just below Ruserā. Though its importance has been diminished by the railway, it is still a valuable trade highway, and there are many large bazars and marts on its banks. It is navigable practically all the year round for country boats of fair size. Its offshoots, the Jamwāri and Balān, leave it near Pūsa, and after flowing through the south-west of the Samāstipur subdivision, rejoin the parent stream in Monghyr, before it falls into the Ganges at Khagariā. All the rivers in the head-quarters and Madhubanī subdivisions belong to the Kamlā-Tiljūgā group, so called because they converge at Tilakeswar in the south-east corner of the Ruserā *thāna*, and are thenceforward known indiscriminately by either

name while proceeding through Monghyr and Bhāgalpur to join the Ganges and the Kosi by various tortuous courses. The first of the group, the Bāghmati, rises in Nepāl, and during its course through Darbhanga pursues an easterly direction parallel to the Burhī Gandak; it formerly joined this river near Ruserā, but has within the past thirty years worn a new bed for itself, and now cuts into the Karai and joins the Tiljūgā at Tilakeswar. The Karai prior to its junction with the Bāghmati is an unimportant stream. The Little Bāghmati, on which the town of Darbhanga stands, also finds its way into the Tiljūgā by the bed of the Karai. Its chief tributary is the Dhaus, which runs through the north-west of the Benīpati *thāna*. The Little Bāghmati was formerly joined near Kamtaul by the Kamlā, a river whose old beds are found all over the north of the Madhubanī subdivision. It used to flow 10 miles east of Madhubanī town, but now passes 10 miles to the west of it, its main channel running about 4 miles east of Darbhanga town past Baherā, Singiā, and Hirni to Tilakeswar. It is a fairly large river in the rains and liable to heavy floods. Still farther east is the Little Balān, a deep and narrow river with a well-defined bed, which runs south through the eastern part of the Khajaulī and Madhubanī *thānas*, and joins the Tiljūgā near Ruserā. The Balān proper, also known as the Bhāti Balān, is a river with a wide shifting sandy bed, liable to heavy floods but practically dry during a great part of the year. Its old beds are found all over the north of the Phulparās *thāna*. Last comes the Tiljūgā, which rises in Nepāl and skirts the entire eastern boundary of the District, though portions of it are in Bhāgalpur. The rivers in the Madhubanī and head-quarters subdivisions are liable to overflow their banks during heavy floods; but they rapidly drain off into the low-lying country in the south-east of the District, on which all the lines of drainage north of the Burhī Gandak converge.

The District is covered by the older alluvium. *Kankar* or Geology nodular limestone of an inferior quality occurs in places.

Darbhanga contains no forests; and, except for a few very Botany. small patches of jungle, of which the chief constituents are the red cotton-tree (*Bombax malabaricum*), *khair* (*Acacia Catechu*), and *sissū* (*Dalbergia Sissoo*), with an undergrowth of euphorbiaceous and urticaceous shrubs and tree weeds, and occasional large stretches of grass land interspersed with smaller spots of *ūsar*, the ground is under close cultivation, and besides the crops carries only a few field-weeds. Near villages

small shrubberies may be found containing mango, *sissū*, *Eugenia Jambolana*, various species of *Ficus*, an occasional tamarind, and a few other semi-spontaneous and more or less useful species. Both the palmyra palm (*Borassus flabellifer*) and the *khajār* or date-palm (*Phoenix sylvestris*) occur planted and at times self-sown. The field and roadside weeds include various grasses and sedges, chiefly species of *Panicum* and *Cyperus*, and in waste corners and on railway embankments thickets of *sissū*, derived from both seeds and root-suckers, very rapidly appear. The sluggish streams and ponds are filled with water-weeds, the sides being often fringed by reedy grasses and bulrushes, sometimes with tamarisk bushes intermixed.

Fauna.

Wild hog are very common; a stray tiger or leopard occasionally wanders down along a river-bank from Nepāl, and a few wolves are also found. Crocodiles infest the rivers, and several kinds of dangerous snakes abound, the most common being the *karait* (*Bungarus caeruleus*) and the *gohuman* or cobra (*Naia tripudians*).

Climate,
tempera-
ture, and
rainfall.

Dry westerly winds are experienced in the hot season, but the temperature is not so excessive as in South Bihār, the highest on record at Darbhanga town being 107° in 1894. The mean maximum temperature ranges from 73° in January to 96° in April and May, and falls to 75° in December, decreasing rapidly in November and December. The mean minimum temperature varies from 52° in January to 80° in July; the lowest ever recorded is 38.3° in January, 1878. Rainfall is heavy in the submontane tract, partly owing to the showers which occur when cyclonic storms break up on reaching the hills, and partly because the monsoon current is stronger towards the west. The annual rainfall for the District averages 50 inches, of which 7.4 inches fall in June, 12.5 in July, 12.9 in August, and 9.9 in September.

Floods.

Parts of Darbhanga District, especially the extreme south and the *doāb* between the Bāghmati and the Little Gandak, are liable to inundations; but these usually result in little damage. Heavy floods, however, occurred in 1898, 1902, and 1906, causing some loss of life and cattle, carrying away houses, and damaging the roads. The floods of 1906 were particularly severe, causing great distress and, in some tracts, scarcity, and necessitating famine relief measures.

History
and
archaeo-
logy.

In ancient times the District formed part of the old kingdom of Mithilā. It passed successively under the Pāl and Sen dynasties, and was conquered by Muhammad-i-Bakhtiyār Khilji

in 1203. From the middle of the fourteenth century it was under a line of Brāhman kings until it was merged in the Mughal empire in 1556. Considering the present position of Darbhanga District as the head-quarters of Mithilā Brāhmanism, singularly little is known of its early history prior to the Muhammadan period. The Rāmāyana contains a few references to localities which local patriotism identifies with some existing villages in the Benīpatī *thāna*, chief among them being Ahīārī, which is said to have been the abode of Ahalyā, the wife of Gautama Rishi, who was turned into stone by her husband's jealous harshness and restored to life by Rāma. But no reference is found to any place in the District in the more authentic records of Buddhism; and it seems to have been left unvisited by the Buddhist pilgrims, who traversed a large part of Bihār in the fifth and seventh centuries of the Christian era. Nor is it possible to draw from the history of the Pāl and Sen dynasties even such scanty information as is obtainable in regard to Muzaffarpur and Sāran. There can be little doubt that up to the twelfth or thirteenth century Darbhanga was relatively a backward tract, and that its development has coincided with the rise of Brāhmanism. The oldest known document relating to the District is a grant dated A. D. 1400, conveying the village of Bisfi in the Benīpatī *thāna* to the poet Vidyapati, who flourished in the reign of Rājā Siva Singh and made the latter the best known of all the Hindu Rājās of Mithilā. Probably the oldest family in the District is that of the Rājā of Dhauraur, which flourished long before the English occupation, but is now in very reduced circumstances. At the present day, the only landholder of any historic importance is the Mahārāja of Darbhanga (see DARBHANGĀ RĀJ). When Darbhanga passed into the hands of the British in 1765, it was included in the *Sūbah* of Bihār and formed with the greater part of Muzaffarpur District the *sarkār* of Tirhut. Bihār was retained as an independent revenue division, and in 1782 Tirhut (including Hājipur) was made into a Collectorate. In 1875 Tirhut was divided into the two existing Districts of Muzaffarpur and Darbhanga. The ruins of old forts are found at JAYNAGAR, Berautpur, Bhawāra, Balarājpur, and Mangal.

The population of the present area increased from 2,136,898 The in 1872 to 2,630,496 in 1881, 2,801,955 in 1891, and people. 2,912,611 in 1901. The increase in 1881 was largely due to defective enumeration in 1872. During the last of the decennial periods, the progress of the District was impeded

by scarcity in 1891 and by famine in 1896-7; the period moreover was not a healthy one, and the recorded deaths outnumbered the births in three out of the ten years. Fever causes the highest mortality, while cholera occasionally appears in an epidemic form. Plague appeared in the District at the end of 1900. Deaf-mutism is prevalent along the course of the Burhī Gandak and Bāghmati rivers.

The principal statistics of the Census of 1901 are given in the following table:—

Subdivision	Area in square miles	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages				
Darbhanga	1,224	2	1,306	1,065,595	871	+ 1.6	35,628
Madhubanī	1,346	1	1,084	1,094,379	813	+ 7.8	26,830
Samāstipur	778	1	843	752,637	967	+ 1.9	40,170
District total	3,348	4	3,233	2,912,611	870	+ 3.9	102,628

The four towns are DARBHANGĀ, the head-quarters, MADHUBANĪ, RUSERĀ, and SAMĀSTIPUR.

Darbhanga supports a larger population to the square mile than any District in Bengal except Muzaffarpur, Sāran, and the Twenty-four Parganas (excluding the Sundarbans). The density is greatest in the Samāstipur subdivision, where the rich uplands produce valuable crops. There is still some room for expansion in Madhubanī, but in the other subdivisions the pressure on the soil is already so great that further increase is not to be expected or desired. Many males of the class of landless labourers seek a livelihood in other parts; they go by preference to the neighbourhood of Calcutta or to Dacca and North Bengal. The vernacular of the District is the Maithilī dialect of Bihārī; Musalmāns speak a form of Maithilī with an admixture of Persian and Arabic words, known as Jolāhā *bolī*. In 1901 Hindus numbered 2,559,128, or 87.9 per cent. of the total population, and Musalmāns 352,691, or 12.1 per cent.

Among the Hindus the most numerous castes are Ahīrs or Goālās (384,000), Dosādhs (208,000), Brāhmans (198,000), Bābhans (154,000), Dhānuks (152,000), Koiris (145,000), Mallāhs (117,000), and Chamārs (106,000); while Kewats, Khatwes, Kurmīs, Musahars, Rājputs, Tāntis, and Telis each number between 50,000 and 100,000. Two small castes, Deohars (inoculators) and Dhīmars (grain-parchers, *pālki-*

Castes and occupations.

bearers, &c.), are peculiar to the District. Among Musalmāns, Shaikhs (153,000), Jolāhās (58,000), Dhuniās (40,000), and Kunjrās (39,000) are the best represented. Agriculture supports 78·6 per cent. of the population, industries 10·2 per cent., commerce 0·4 per cent., and the professions 1·1 per cent.

There are several small Christian communities of different denominations, but no missions of any importance; and of 710 Christians in the District in 1901 only 296 were natives. There is a Roman Catholic mission at Samāstipur, also a Methodist mission, and a Zanāna Bible and Medical mission.

The elevated land south-west of the Burhī Gandak is the richest and most fertile part of the District, producing all the most valuable *rabi* and *bhadoi* crops. In the low-lying *doāb* between the Bāghmati and the Little Gandak the main crop grown is winter rice, though in many parts good *rabi* crops are also raised on the lands enriched by inundation. In the Baherā and Ruserā *thānas*, in the south-east of the plain which constitutes the rest of the District, the only crop of any importance is winter rice, which when not submerged by floods at too early a date is very prolific. The higher land in the Madhubanī subdivision is suitable for the more valuable *rabi* crops; but the staple crop is winter rice, and the produce of Alāpur, Jabdi, and Bachaur is famous all over Bihār. The only classification of land understood by the ordinary cultivator is that into *dhanhar* and *bhith*, the former being the lowlands on which rice is grown, and the latter the uplands growing cereals or crops of any kind other than rice.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Darbhanga . . .	1,224	923	132
Madhubanī . . .	1,346	1,000	169
Samāstipur . . .	778	587	59
Total	3,348	2,510	360

Chief agricultural statistics and principal crops.

It is estimated that 44 per cent. of the net cultivated area is twice cropped.

The most important feature of the agriculture of the District is its dependence on the *aghani* (or winter) harvest, no less than 58 per cent. of the cultivated area being under crops of this kind, chiefly winter rice, which in 1903-4 covered 1,465 square miles. *Maruā* (*Eleusine coracana*) is grown over an area of 331 square miles; wheat covers 106 square miles, barley 163,

maize 152, gram 83, and miscellaneous food-grains 58 square miles; these last are chiefly *khesāri*, *rahar*, *masurī*, *kodon*, *chīna*, *sāwān*, *urd*, *mūng*, *janerā*, and oats. Miscellaneous food-crops, consisting mainly of potatoes, yams, and *suthnī* (*Dioscorea fasciculata*), are extensively grown in the Samāstipur subdivision. The chief non-food crops are oilseeds (principally linseed), covering 349 square miles; they are very largely grown as a catch-crop in winter rice lands, but their value is comparatively small. Tobacco is cultivated on 48 square miles, chiefly in the Samāstipur subdivision. Indigo, with 53 square miles, covers a larger area than in any other Bengal District except Champāran and Muzaffarpur, but the area is steadily decreasing. Sugar-cane and poppy are grown, but to a comparatively small extent. Of the other non-food crops, *kharhaul* or thatching-grass is the most valuable.

Improve-
ments in
agricul-
tural
practice.

The area under cultivation has nearly doubled within the last 100 years, but the greater part of the extension took place in the first half of the nineteenth century and little further expansion is now practicable. Experiments with improved seeds have been made in the Narhan Ward's estate, but without much success. Several Europeans are now cultivating sugar-cane, and experiments in the growth of rhea and the preparation of rhea fibre are being made at Dalsingh Sarai. The Government estate at Pūsa has recently been made over to the Government of India as the site for an Imperial agricultural college and research institute, and portions of the estate are being utilized as a farm for experimental cultivation and cattle-breeding. Government advanced Rs. 33,000 as loans after the scarcity of 1891-2, and Rs. 20,000 in the famine of 1897.

Cattle.

The local cattle are weak and small. This is due partly to careless breeding and partly to the want of adequate pasturage.

Irrigation.

There are no Government irrigation works; but an area of 171 square miles, or $6\frac{1}{2}$ per cent. of the cultivated area, is irrigated from other sources, chiefly in the Madhubanī subdivision, where the numerous rivers and streams are very largely taken advantage of to bring water to the winter rice. In the Benīpatī *thāna* in this subdivision a complete system of *āhars* and *pains* has been constructed, and a large area is also irrigated from tanks. In the Samāstipur subdivision extensive irrigation is not practicable, nor is it required for the crops mainly grown, but the valuable poppy and tobacco crops are watered from wells.

Minerals.

Beds of *kankar* or nodular limestone of an inferior quality

are met with in several places. Saliferous earth is found in patches all over the District, and a special caste, the Nuniās, earn a scanty livelihood by extracting saltpetre. The amount produced in 1903-4 was 51,000 maunds.

Coarse cloth, pottery, and mats are manufactured, and brass ^{Arts and manufactures.} utensils made at Jhanjhārpur have a local reputation. The manufacture of indigo in the District by European agency dates back to the time of the Permanent Settlement, the present concerns of Dalsingh Sarai, Jitwārpur, Tīwāra, and Kamtaul having all been founded before the year 1800. During the nineteenth century the cultivation of indigo spread into every *thāna* of the District, but it was always more prevalent in the south than in the north, where the soil is less suitable for it. In 1874 the District contained the largest concern in India and probably in the world: this was Pandaul, which with its outworks comprised an area of 300 square miles. It was subsequently split up, the northern outworks being purchased by the present Mahārājā of Darbhanga. He abandoned the cultivation of indigo about three years ago; and the fall in the price of the dye, due to the competition of artificial substitutes, has caused many other factories to abandon or contract very greatly the area under indigo. The Settlement officer in 1903 enumerated 28 factories with 36 outworks in the District. In 1903-4 the area under indigo had fallen to 34,000 acres, of which the greater part lay within the Samāstipur subdivision; and in 1904 the number of factories had decreased to 24 with 27 outworks. The chief feature of the industry in this District, as compared with the other indigo-growing tracts in North Bihār, is the large area cultivated direct by the factories themselves, amounting in the Samāstipur subdivision to no less than 94 per cent. of the total area under indigo. The plant, when cut, is fermented in masonry vats and oxidized either by beating or by currents of steam. The dye thus precipitated is boiled and dried into cakes. In 1903-4 the out-turn of indigo was 7,015 maunds, valued at 9.12 lakhs. Of late years, owing to the fall in the value of indigo, the factories have taken to the growing of ordinary crops, and this tendency is particularly marked in the Dalsingh Sarai *thāna*, where the results have been highly successful. The sugar industry is important in the Madhubanī subdivision, where the out-turn of 30 factories in 1904 was valued at 2.71 lakhs.

The principal exports are rice, indigo, gram, pulses, linseed, Commerce. mustard seed, saltpetre, tobacco, hides, *ghā*, and timber; and the principal imports are rice and other food-grains, salt, kero-

sene oil, gunny-bags, coal and coke, European cotton piece-goods, and raw cotton. Gram, pulses, and oilseeds are chiefly sent to Calcutta, and rice and other food-grains to Sāran and Muzaffarpur. The imports of food-grains come for the most part from Bhāgalpur and Nepāl, coal and coke from Burdwān, kerosene oil from the Twenty-four Parganas, and salt and piece-goods from Calcutta. The principal marts are DARBHANGĀ TOWN, SAMĀSTIPUR, MAHUBANĪ, RUSERĀ, Pūsa, Kamtaul, Dalsingh Sarai, NARAHĪ (for the Nepālese grain traffic), and JHANJHĀRPUR. The chief trading castes are Agarwāls, Barnawārs, Kasarwānis, Kathbaniās, Khattrīs, and Sinduriās. Most of the trade with Calcutta and the neighbouring Districts is carried by rail. The traffic with Nepāl is carried in carts and on pack-bullocks, and occasionally by coolies. Some timber is floated down the rivers.

Railways. The famine of 1874 gave a great impetus to the construction of railways, and the District is on the whole well off in the matter of communications. Its south-west corner is traversed for 29 miles by the main line of the Bengal and North-Western Railway, and also by 25 miles of the new chord-line from Hājipur to Bachwāra, which runs parallel to the Ganges embankment from east to west. From Samāstipur a line runs to Darbhanga town and there branches off in two directions, the first north-west to Sitāmarhi through Kamtaul and Jogiāra, and the other due east to Khanwā Ghāt on the Kosi. The total length of the line within the District is 146 miles. Most of the earthwork for a line from Sakri to Jaynagar on the Nepāl frontier was completed as a relief work during the famine of 1897; and the line, which has now been opened, should tap a large grain supply from Nepāl.

Roads. Including 769 miles of village tracks, the District contains 1,949 miles of roads, of which 47 miles are metalled. The most important is the road running eastwards from Muzaffarpur through Darbhanga town and the subdivisional head-quarters to places in the interior, and from Darbhanga town and Sakri, Jhanjhārpur, and Nirmāli railway stations to the Nepāl frontier. Most of the roads were constructed as relief works in the famine of 1874, and others by the road cess committee which was established in 1875, and by its successor, the District board. The total mileage is now about three times what it was thirty years ago. Many of the roads in the low-lying tract in the central and south-eastern part of the District are impassable during the rains; their high embankments are frequently breached in time of flood, to avoid which an enormous amount

of bridging would be necessary. Much has been done in this direction in recent years: five pontoon bridges have been erected at different points on the Burhī Gandak and the Bāghmati; and the road from Darbhanga town to Jaynagar on the frontier, which crosses all the rivers in the west of the Madhubanī subdivision, has been bridged throughout at the cost of the Darbhanga Rāj. In Samāstipur, where the country is high, and comparatively little embanking or bridging is required, most of the roads are in good order and can be used at all seasons of the year.

The Ganges is navigable by steamers throughout the year; and a daily service, which plies up the river from Goalundo, calls at Hardāspur in the extreme south-west corner of the Samāstipur subdivision. The Burhī Gandak river is navigable by boats of 1,000 maunds burden at all seasons, but its boat traffic has much decreased since the opening of the railway. Boats of 400 or 500 maunds can pass up the Bāghmati except in a very dry season. The other rivers in the District are navigable in the rainy season only, and are not much used even then owing to their liability to floods. The principal ferries are those on the Burhī Gandak and Bāghmati rivers, the most important being at Māgardihi Ghāt (Samāstipur) and Singiā Ghāt (Ruserā) on the Burhī Gandak, and at Kalyā Ghāt and Haiā Ghāt on the Bāghmati.

Whenever the normal rainfall falls short of the average or is badly distributed, the crops suffer; the greater part of the cultivated area is under winter rice, and the most serious results ensue from a premature cessation of the monsoon. The first severe famine of which there is any reliable record is that of 1874. The rains of 1873 commenced late, were insufficient to bring even the *bhadoi* crops to full maturity, and ceased in September with a deficiency in some parts of no less than 28 inches. The rice crop was very short everywhere, and in the head-quarters subdivision it was almost wholly destroyed. Relief operations on a lavish scale were undertaken in ample time, and serious loss of life was prevented. Severe local scarcities again occurred in 1875-6, 1888-9, and 1891-2. In 1895 the harvest was again a short one, and this was followed by the great crop failure of 1896, which affected the whole District except two of the three *thānas* in the Samāstipur subdivision; in the third, Wārisnagar, the distress was less acute than in the rest of the District, while it was greatest in the west of the head-quarters and Madhubanī subdivisions. Relief was promptly given, and the total expenditure amounted to

nearly 37 lakhs. The numbers in receipt of relief rose to 236,000 at the end of May, 1897, of whom 147,000 persons with 10,000 dependents were engaged on relief works and 79,000 were in receipt of gratuitous relief. The imports of grain into the District during the famine amounted to more than 44,000 tons. The total number of persons relieved, reckoned in terms of one day, was 40,911,000 units, or more than in any other Bengal District; but the death-rate was unusually low during the greater part of the distress, and the recovery of the District after the famine was rapid.

District
subdivi-
sions and
staff.

For administrative purposes the District is divided into three subdivisions, with head-quarters at DARBHANGĀ, MADHUBANĪ, and SAMĀSTIPUR. The staff subordinate to the District Magistrate-Collector at head-quarters consists of an Assistant Magistrate-Collector and five Deputy-Magistrate-Collectors, while the Madhubanī and Samāstipur subdivisions are each in charge of a Joint or Assistant Magistrate assisted by a Sub-Deputy-Collector.

Civil and
criminal
justice.

The civil courts subordinate to the District Judge are those of three Munsifs at Darbhanga, three at Samāstipur, and two at Madhubanī; civil cases above a certain value are disposed of by two Subordinate Judges at Muzaffarpur. The criminal courts include those of the Sessions Judge and District Magistrate and of the Joint, Assistant, and Deputy-Magistrates referred to above. There is little heinous crime, the commonest offences being theft and burglary.

Land
revenue.

At the time of Todar Mal's assessment Darbhanga formed a portion of *sarkār* Tirhut, which belonged to the northern division of the *Sūbah* or province of Bihār. The 42 *parganas* for which figures are available returned a productive area of 320 square miles. The revenue assessed on them was 2.31 lakhs, giving an incidence of Rs. 1-2 per cultivated acre, as compared with Rs. 1-7 in Tirhut as a whole, Rs. 1-8 in Sāran, and Rs. 1-6-3 in Champān. The inference is that Darbhanga was then in a more backward agricultural condition than the rest of North Bihār, and it is probable that the more remote parts were in the hands of refractory and independent *zamindārs*. The subsequent development of the District may be gauged from the fact that it now contains a cultivated area of 2,510 square miles, so that cultivation has increased eight-fold in the last three centuries. The present revenue is 7.97 lakhs, or more than three times what it was in Akbar's reign; but the incidence per cultivated acre is under 8 annas, or less than half what it was at Todar Mal's assessment. At the

Decennial Settlement in 1790, which was made permanent in 1793, little more than a quarter of the total area covered by the present District was dealt with and nearly two-thirds of the present cultivated area escaped assessment, the revenue demand being 5.48 lakhs on an area of 892 square miles. Proceedings were afterwards instituted to resume lands held revenue free under illegal or invalid titles, and by 1850 3.61 lakhs had been thus added to the land revenue. In 1903-4, of the total current demand 7.86 lakhs was payable by 13,752 permanently settled estates and Rs. 10,500 by estates held direct by Government, while 2 small estates are temporarily settled. Owing to the backward state of the District at the time of the Permanent Settlement, the incidence of revenue per acre is only Rs. 0-5-10. One of the most remarkable features in the revenue administration is the increase in the number of permanently settled estates owing to partition; these numbered 8,257 in 1879-80, while at the time of the Permanent Settlement there were only 532.

The District has recently (1896-1903) been surveyed, and a record-of-rights has been prepared. It was found that settled and occupancy ryots hold 83 per cent. of the total occupied area, and these pay cash rents for 92 per cent. of the area held by them; while non-occupancy ryots and under-ryots pay produce rents for 7 and 53 per cent. respectively of the areas held by them. Produce rents are of three kinds: *batai*, *bhaoli*, and *mankhap*. In the first case the actual crop is divided between the landlord and the ryot; in the second the value of the crop is appraised on the ground shortly before the harvest, and a share is paid by the ryot to the landlord either in cash or kind; while in the third case the ryot pays a certain quantity irrespective of the out-turn. Very high rents are charged for land growing valuable crops, such as tobacco, poppy, and chillies, and it is not unusual to find tobacco lands assessed at Rs. 15 to Rs. 20 per acre. The average rates for good rice lands are from Rs. 4 to Rs. 5 per acre, and for lands producing both an autumn and a spring harvest from Rs. 5 to Rs. 6. On the whole, the highest rents are found in Samāstipur and the lowest in Madhubanī. The only peculiar tenure in the District is that known as *jaidādi*, which prevails in the low lands of the Baherā *thāna*. As this tract is extremely liable to inundation, the ryot pays rent not on his whole holding but only on such part of it as actually produces a crop, the cropped area being measured for this purpose just before the harvest and a rate previously agreed upon applied to it. For the

whole District ryots at fixed rents pay Rs. 1-12 per acre, settled and occupancy ryots Rs. 3-12-6, and non-occupancy ryots Rs. 4-7-10 per acre, the average for the three classes being Rs. 3-12-4 per acre, while under-ryots pay Rs. 4-8-4 per acre.

The following table gives the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1	1890-1.	1900-1.	1903-4
Land revenue . .	8,09	7,97	7,91	7,99
Total revenue . .	14,30	18,18	19,59	20,47

Local and municipal government. Outside the four municipalities of DARBHANGĀ, RUSERĀ, SAMĀSTIPUR, and MADHUBANĪ, local affairs are managed by the District board, with subordinate local boards in each sub-division. In 1903-4 its income was Rs. 3,88,000, of which Rs. 2,30,000 was derived from rates; and the expenditure was Rs. 4,13,000, including Rs. 2,33,000 spent on public works.

Police and jails. The District contains 11 police stations and 12 outposts. The force subordinate to the District Superintendent consists of 3 inspectors, 36 sub-inspectors, 27 head constables, and 403 constables. The rural police consists of 286 *daffadārs* and 4,462 *chaukidārs*. The District jail at Darbhanga town has accommodation for 355 prisoners, and subsidiary jails at Madhubanī and Samāstipur for 37.

Education. Education, though backward, has made considerable progress in recent years. In 1901, 3.5 per cent. of the population (7.1 males and 0.1 females) could read and write. The number of pupils under instruction increased from 24,864 in 1892-3 to 34,927 in 1900-1. In 1903-4, 45,545 boys and 2,604 girls were at school, being respectively 20.0 and 1.1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,692: namely, 19 secondary, 1,151 primary, and 522 special schools. The total expenditure on education was Rs. 1,21,000, of which Rs. 9,000 was met from Provincial funds, Rs. 48,000 from District funds, Rs. 3,000 from municipal funds, and Rs. 39,000 from fees.

Medical. In 1903 the District contained 16 dispensaries, of which 8 had accommodation for 172 in-patients. The cases of 239,000 out-patients and 2,800 in-patients were treated during the year, and 6,000 operations were performed. The ex-

penditure was Rs. 63,000, of which Rs. 900 was derived from Government contributions, Rs. 29,000 from Local and Rs. 7,000 from municipal funds, and Rs. 26,000 from subscriptions.

Vaccination is compulsory only in municipal areas. In Vaccination. 1903-4 the number of persons successfully vaccinated was 90,000, representing 32.2 per 1,000 of the population, or rather below the general ratio for Bengal.

[J. H. Kerr, *Settlement Report* (Calcutta, 1904); L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1907).]

Darbhanga Subdivision.—Head-quarters subdivision of Darbhanga District, Bengal, lying between 25° 38' and 26° 26' N. and 85° 41' and 86° 44' E., with an area of 1,224 square miles. The population rose from 1,048,806 in 1891 to 1,065,595 in 1901, when there were 871 persons per square mile. The greater part of the subdivision is a low-lying plain, intersected by numerous streams and marshes; and the chief crop is winter rice, which, when not submerged at too early a date by floods, yields an abundant out-turn. The subdivision contains two towns, DARBHANGĀ (population, 66,244), the head-quarters, and RUSERĀ (10,245); and 1,306 villages.

Madhubani Subdivision.—Northern subdivision of Darbhanga District, Bengal, lying between 26° 2' and 26° 40' N. and 85° 45' and 86° 44' E., with an area of 1,346 square miles. The population rose from 1,014,700 in 1891 to 1,094,379 in 1901, when there were 813 persons per square mile. It is less densely inhabited than the rest of the District, and is the only subdivision where there is much room for further expansion. It consists of a rich alluvial plain, traversed by ridges of uplands suitable for *rabi* cultivation; but the staple crop is winter rice, and the produce of Alāpur, Jabdi, and Bachaur is famous all over Bihār. It contains one town, MADHUBANĪ (population, 17,802), the head-quarters; and 1,084 villages. NARAHĪĀ is an important centre of the Nepālese grain traffic; at JHANJHĀRPUR on the railway brass utensils of a superior quality are manufactured; and at SAURĀTH an annual *mela* or religious festival is held. Sugar is extensively manufactured throughout the subdivision. JAYNAGAR is the site of a mud fort.

Samāstipur Subdivision.—Southern subdivision of Darbhanga District, Bengal, lying between 25° 28' and 26° 5' N. and 85° 31' and 86° 1' E., with an area of 778 square miles. The population rose from 738,449 in 1891 to 752,637 in 1901, when there were 967 persons per square mile, or more than in any other subdivision of the District. With the exception

of part of the *doāb* between the Bāghmati and Burhī Gandak rivers, the subdivision consists of a large block of upland, interspersed with a few *chaur*s or marshes. It is the richest and most fertile part of the District, producing all the most valuable *rabi* and *bhadoi* crops, and is also the centre of the indigo industry. It contains one town, SAMĀSTIPUR (population, 9,101), the head-quarters; and 843 villages. Samāstipur town is an important railway junction and contains workshops of the Bengal and North-Western Railway. The Government estate at PŪSA has recently been made over to the Government of India as the site for an Imperial agricultural college and research laboratory, and portions of the estate are being utilized as an experimental farm for cultivation and cattle-breeding.

Darbhanga Rāj.—An estate in Bengal. The Darbhanga family traces its origin to one Mahes Thākur, who is said to have come from Jubbulpore about the beginning of the sixteenth century. He took service as a priest with the descendants of Rājā Siva Singh, who still exercised a nominal supremacy in Tirhut; but when they collapsed before the advancing Muhammadan power, Mahes Thākur induced Akbar to grant him what are now the Darbhanga Rāj estates. He and his descendants gradually consolidated the power of the family in both agrarian and social matters; and though, owing to recusancy at the Permanent Settlement, the Rājā of that period was for some time deprived of a portion of his property, the British Government eventually recognized him. During the first half of the nineteenth century, owing to mismanagement and litigation, the estate fell into considerable difficulties. But the litigation had the effect of deciding that the estate was impartible and that the inheritance to it was regulated by primogeniture; and owing to a long minority of over twenty years from 1860 onwards, during which the estate was under the Court of Wards, it is now in a very flourishing condition. DARBHANGĀ TOWN has been the head-quarters of the family since 1762, prior to which date they resided at Madhubanī. The present Mahārājā Bahādur, Sir Rāmeswar Singh, K.C.I.E., succeeded on the death of his brother in 1898.

The estates at present comprise lands situated in the Districts of Darbhanga, Muzaffarpur, Gayā, Monghyr, Purnea, and Bhāgalpur, with a total area of more than 2,410 square miles. The Mahārājā is also the owner of house property in the towns of Darbhanga, Muzaffarpur, Patna, Benares, Calcutta,

Allahābād, Darjeeling, and Simla, and of the indigo concerns of Sarahiā and Bachaur in Muzaffarpur District, Pandaul in Darbhanga, and Gondwāra in Purnea. The rent-roll exceeds 32 lakhs, and the Government revenue, including cesses, is $7\frac{1}{4}$ lakhs. The present system of management was introduced when the estate was under the Court of Wards, and is very complete. The estate is divided into circles of from 50 to 200 villages each; each circle is in charge of a sub-manager, who is responsible to the Mahārājā for its efficient working, and under each sub-manager there are usually several *tahsildārs* in charge of groups of villages or rent collectors. The average rent payable by the occupancy ryots of the Rāj is believed to be about Rs. 4 per acre.

Darbhanga Town.—Head-quarters of Darbhanga District, Bengal, situated in $26^{\circ} 10'$ N. and $85^{\circ} 54'$ E., on the left bank of the Little Bāghmati river. It probably takes its name from one Darbhangi Khān, a Muhammadan freebooter; the traditional derivation from *dar-i-Bangal*, or 'gate of Bengal,' seems to be etymologically impossible. The population of the town increased from 53,744 in 1872 to 65,955 in 1881 and 73,561 in 1891, but fell again to 66,244 in 1901. This decrease, however, is to a great extent fictitious; the population was abnormally large in 1891 on account of the presence of some 5,000 Brāhmins who had come to partake of a feast given by the Mahārājā, while in 1901 the Census was taken on an auspicious day for weddings in connexion with which a large number of persons were temporarily absent. In 1901 the inhabitants included 47,946 Hindus, 18,122 Muhammadans, and 171 Christians. Communications by road are good in all directions. The town is connected with the north Ganges railway system by a line from Samāstipur on the south, which branches off at Darbhanga in two directions, the first north-west to Samāstipur and the second north-east to Khanwā Ghāt on the Kosi. A considerable trade is carried on, the principal exports being oilseeds, *ghī*, and timber; and the imports, food-grains, salt, gunny cloth, piece-goods, lime, and iron. Darbhanga was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged Rs. 42,000, and the expenditure Rs. 35,000. In 1903-4 the income was Rs. 55,000, of which Rs. 23,000 was derived from a tax on persons (or property tax), and Rs. 11,000 from a tax on houses and lands; and the expenditure was Rs. 38,000. A large market-place has been constructed between the hospital and the Mahārājā's garden. The whole

country around Darbhanga becomes a swamp during the rains, being subject to inundations from the Kamlā and Little Bāghmati; and the civil station and public offices were therefore moved in 1884 to the suburb of Laheriā Sarai at the extreme south of the town. The District jail has accommodation for 355 prisoners, who are employed on oil-pressing, weaving, the manufacture of *newār*, ropes, matting, &c.

Jaynagar.—Village in the Madhubanī subdivision of Darbhanga District, Bengal, situated in $26^{\circ} 35' N.$ and $86^{\circ} 9' E.$, a few miles south of the Nepāl frontier, and a little east of the Kamlā river. Population (1901), 3,551. The village contains a mud fort attributed to Alā-ud-dīn, king of Bengal (1493–1518), and said to have been constructed to resist the incursions of the hill tribes. Near the fort is an encampment made by the British during the Nepāl War.

Jhanjhārpur.—Village in the Madhubanī subdivision of Darbhanga District, Bengal, situated in $26^{\circ} 16' N.$ and $86^{\circ} 17' E.$, on the Bengal North-Western Railway. Population (1901), 5,639. Its brass utensils, particularly the *pānbatta* or box for holding betel-leaf and the *gangājālā* or water-pot, have a local reputation.

Madhubanī Town.—Head-quarters of the subdivision of the same name in Darbhanga District, Bengal, situated in $26^{\circ} 21' N.$ and $86^{\circ} 5' E.$, about 16 miles north-east of Darbhanga town. Population (1901), 17,802. Madhubanī is an important trading centre on the road from Sakri station on the Bengal and North-Western Railway to the Nepāl frontier. It was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 16,000, and the expenditure Rs. 12,000. In 1903–4 the income was Rs. 18,000, mainly derived from a tax on persons (or property tax) and the receipts from municipal markets; and the expenditure was Rs. 16,000. The town contains the usual public offices; the sub-jail has accommodation for 14 prisoners.

Narahiā.—Village in the Madhubanī subdivision of Darbhanga District, Bengal, situated in $26^{\circ} 22' N.$ and $86^{\circ} 32' E.$ Population (1901), 5,069. Narahiā is connected by road with the Bengal and North-Western Railway, and is an important centre for the grain traffic with Nepāl.

Pūsa.—Village in the Samāstipur subdivision of Darbhanga District, Bengal, situated in $25^{\circ} 59' N.$ and $85^{\circ} 40' E.$, near the right bank of the Burhī Gandak and close to the boundary of Muzaffarpur District. Population (1901), 4,570. The village was acquired by Government in 1796; and other

waste lands appertaining to Bakhtiyārpur, a village on the other side of the river with a population of 1,384 in 1901, were assigned to Government in 1798 without any additional rent. Pūsa was long used as a stud dépôt, but all stud operations were closed in 1874; and in 1875 a model farm was established, the soil being of the first quality, the situation good, and water carriage and large markets within easy reach. In 1877 Government leased the estate to a European firm, who continued to grow tobacco here in prolongation of previous experiments till 1897, when the lease expired and was not renewed. In 1904 the estate, which comprises 1,280 acres, was made over to the Government of India as the site for an Imperial agricultural college, research laboratory, experimental cultivation farm, and cattle-breeding farm. The necessary buildings are being constructed, and the experimental farm and cattle-breeding farm have been started.

Ruserā.—Town in the head-quarters subdivision of Darbhanga District, Bengal, situated in $25^{\circ} 45' N.$ and $86^{\circ} 2' E.$, on the east bank of the Little Gandak, just below the former confluence of that river with the Bāghmati. Population (1901), 10,245. Owing to its position on the Little Gandak, Ruserā was at one time the largest market in the south of the District; but though it has still an important bazar, it has somewhat lost its importance since the opening of the railway. Ruserā was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 5,700, and the expenditure Rs. 4,900. In 1903-4 the income, mainly derived from a tax on persons (or property tax), was Rs. 6,600; and the expenditure was Rs. 6,000.

Samāstipur Town.—Head-quarters of the subdivision of the same name in Darbhanga District, Bengal, situated in $25^{\circ} 52' N.$ and $85^{\circ} 48' E.$, on the south bank of the Burhi Gandak river. Population (1901), 9,101. Samāstipur is an important junction on the Bengal and North-Western Railway, and the site of railway workshops which employ 1,000 hands. It is also a large trading centre. It was constituted a municipality in 1897. The income during the five years ending 1901-2 averaged Rs. 8,000, and the expenditure Rs. 7,600. In 1903-4 the income was Rs. 9,500, of which Rs. 4,000 was derived from a tax on persons (or property tax); and the expenditure was Rs. 8,600. The town contains the usual public offices; the sub-jail has accommodation for 23 prisoners.

Saurāth.—Village in the Madhubanī subdivision of Darbhanga District, Bengal, situated in $26^{\circ} 24' N.$ and $86^{\circ} 3' E.$ Population (1901), 2,062. It is famous for the *mela* (religious fair) which takes place annually in June or July, when large numbers of Brāhmans assemble to settle their children's marriages. A fine temple to Mahādeo was built in 1845 by the Darbhanga Rāj.

BHĀGALPUR DIVISION

Bhāgalpur Division.—A Division of Bengal, bounded on the north by Nepāl, and lying between $23^{\circ} 48'$ and $27^{\circ} 13'$ N. and $85^{\circ} 36'$ and $88^{\circ} 53'$ E. The Division formerly included the District of Mālda, transferred to Eastern Bengal and Assam in 1905; and Darjeeling, which used to be part of the Rājshāhi Division, was at the same time attached to this Division. The head-quarters of the Division are at Bhāgalpur town, except for a portion of the hot season when they are at Darjeeling. It includes five Districts, with area, population, and revenue as shown below:—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Monghyr . . .	3,922	2,068,804	11,95
Bhāgalpur . . .	4,226	2,088,953	9,31
Purnea . . .	4,994	1,874,794	14,11
Darjeeling . . .	1,164	249,117	2,09
Santāl Parganas . . .	5,470	1,809,737	3,84
Total	19,776	8,091,405	41,30

The population in 1872 was 6,709,852, in 1881 it was 7,510,269, and in 1891 it had grown to 7,990,464, the density being 409 persons per square mile. In 1901 Hindus constituted 74.48 per cent. of the population, Muhammadans 16.82 per cent., and Animists 7.93 per cent., while other religions included Christians (16,989, of whom 13,363 were natives) and Jains (723).

The Division is intersected from west to east by the Ganges. The country to the north is for the most part a flat alluvial formation rising gradually towards the foot of the Himālayas, but the greater part of Darjeeling is situated in the Lower Himālayas. In the south the Santāl Parganas form part of the Chotā Nāgpur plateau, which also encroaches upon the southern portions of Bhāgalpur and Monghyr Districts, the hills extending in the latter District as far as the Ganges. These parts are peopled by the Dravidian tribes of Chotā Nāgpur, while north of the Ganges and east of the Mahānandā river, in

Purnea District, there is a strong admixture of the Koch tribe, the last of the invaders from the north-east, and in Darjeeling more than half the population are Nepālese.

The Division contains 14 towns and 18,670 villages; the largest towns are BHĀGALPUR (population, 75,760) and MONGHYR (35,880). Owing to plague in Monghyr at the time of the Census (March, 1901), the figure represents less than its normal population, and a second enumeration held four months later disclosed 50,133 inhabitants. Bhāgalpur town has a large export trade in agricultural produce; and a considerable traffic also passes through Monghyr, SĀHIBGANJ, and RĀJMAHĀL. JAMĀLPUR contains the largest railway works in India, and KATIHĀR is an important railway junction where the Eastern Bengal and the Bengal and North-Western Railway systems meet. The hill station of DARJEELING is the summer headquarters of the Bengal Government and a military cantonment; the Census held at the end of the cold season of 1901 disclosed a population of 16,924 persons, but at a special Census taken during the previous rains 23,852 persons were enumerated. The temples of Baidyanāth at DEOGARH in the Santāl Parganas are a great centre of Hindu pilgrimage, and rock sculptures are found in Bhāgalpur District. The most important historical event of recent times was the Santāl rebellion in 1855, which led to the formation of the Santāl Parganas into a non-regulation District.

Boun-
daries, con-
figuration,
and hill
and river
systems.

Monghyr District (*Mungīr*).—District in the Bhāgalpur Division of Bengal, lying between 24° 22' and 25° 49' N. and 85° 36' and 86° 51' E., with an area of 3,922 square miles. Monghyr is bounded on the north by the Districts of Bhāgalpur and Darbhanga; on the east by Bhāgalpur; on the south by the Santāl Parganas and Hazāribāgh; and on the west by Gayā, Patna, and Darbhanga.

The Ganges flows through the District from west to east, dividing it into two portions of unequal size and of very different character. The northern portion is a great alluvial plain, differing but little from the adjoining portions of Darbhanga and Bhāgalpur. This portion is again subdivided by the Burhī Gandak, the country to the west of that river being similar to the indigo-growing tracts of North Bihār. The remaining portion is traversed by the Tiljūgā, also called the Kamlā, and by the Bāghmati, which was possibly at one time a continuation of the river of the same name which joins the Gandak to the east of Muzaffarpur. It is seamed by deserted channels; and the whole area, which covers about 200 square miles, is

low-lying, swampy, and liable to inundation. The south of the District is also to a great extent alluvial; but the general level is higher and the surface more undulating, and several ranges of hills, outliers of the Vindhyan series, enter the District from the south and converge towards Monghyr town. The principal are the Kharagpur hills, which form a distinct watershed, the Kiul river draining the western, and the Man and other streams the eastern portion of the range. The main channel of the Ganges has several times shifted both to the east and to the west of the rock on which the Monghyr fort stands, alternately forming and washing away large areas of *diāra* lands; but since the earliest times of which any record exists, it has washed the base of the rock immediately to the north of the fort. The largest areas of alluvial deposit formed by these changes in the main channel are comprised in the Government estates of Kutlupur to the west, and Binda *diāra* to the east, of Monghyr town. A large marsh, known as the Kābartāl, in the north of the Begusarai subdivision, apparently marks the old bed of one of the large rivers, and drains eastward through the low tract lying in the north-east of the District.

North of the Ganges the older rocks are concealed by the Geology. alluvium of the Gangetic plain; but south of the river the level rises rapidly and the older rocks soon appear, first as more or less disconnected hill groups, and farther south as a continuous uninterrupted outcrop. These rocks consist of the oldest system recognized by geologists, that known as Archaean. They include a vast series of crystalline rocks of varied composition, including granitic and dioritic gneisses, hornblende and mica-schists, epidiorites, crystalline limestones, and many other rocks collectively known as 'Bengal gneiss'; another very ancient series, consisting of highly altered sedimentary and volcanic rocks, including quartzites, quartz-schists, hornblendic, mica-ceous, talcose, and ferruginous schists, potstones, phyllites, slates, &c., forming an assemblage very similar to that which has received the name of 'Dhārwar schists' in Southern India; and vast granitic masses and innumerable veins of coarse granitic pegmatite, intruded amongst both the schists and the Bengal gneiss. The Bengal gneiss occupies principally the southernmost part of the District. The ancient stratified series assimilated with the Dhārwar forms several hill groups situated between the southern gneissose area and the valley of the Ganges: these are the Kharagpur hills, the largest of the hill masses situated south of Monghyr and east of Luckeesarai, the Sheikhpurā hills and the Gidhaur range, respectively west and

south of Luckeesarai. The rocks of the Gidhaur range are highly metamorphosed by innumerable veins of coarse granitic pegmatites, which are of great economic importance on account of the mica they contain, and constitute the eastern portion of the great mica-belt of Bengal. The coarsest grained, and consequently the most valuable, pegmatites are the comparatively narrow sheets which intersect the schists of the metamorphosed stratified series. The larger and more uniform comparatively fine-grained intrusions are valueless so far as mica is concerned, though they belong to the same system of intrusions. On account of its habit of weathering in the shape of large rounded hummocks, the rock forming these more massive intrusions has often been described under the name of 'dome-gneiss,' which, more accurately, should be 'dome-granite.' The rocks of the Kharagpur hills are not nearly so much altered as those of the Gidhaur range. The strata originally constituted by shales, which in the latter range have been transformed into schists, are altered only to slates in the Kharagpur hills. These slates, which are regularly cleaved and of fairly good quality, are quarried to a certain extent¹.

Botany.

In the portions of the District near the Ganges the rice-fields abound with the usual weeds of such localities. In the swampy tract to the east of the Burhī Gandak, rank *pod* grass and the graceful pampas grow in abundance, and below them *dubh* and other succulent grasses. Near villages there are often considerable groves of mango-trees and palmyra palms; and north of the Ganges perhaps nine-tenths of the trees are mangoes, the fruit of which forms an important item in the food-supply of the poorer classes. Farther from the river on the south the country is more diversified; and, though no Government forests exist, an area estimated at about 427 square miles is under forest, chiefly towards the southern confines of the District and in the Kharagpur estate of the Mahārājā of Darbhanga. The principal trees growing in the alluvial and cultivated areas are the mango (*Mangifera indica*), *pīpāl* (*Ficus religiosa*), banyan (*Ficus indica*), *siris* (*Mimosa Sirissa*), *nīm* (*Melia Azadirachta*), *jāmun* (*Eugenia Jambolana*), *sissū* (*Dalbergia Sissoo*), red cotton-tree (*Bombax malabaricum*), *pākār* (*Ficus infectoria*), jack-fruit tree (*Artocarpus integrifolia*), *bel*-fruit tree (*Aegle Marmelos*), *babūl* (*Acacia arabica*), palmyra (*Borassus flabellifer*), and date-palm (*Phoenix sylvestris*); while

¹ T. H. Holland, 'Mica Deposits of India,' *Memoirs, Geological Survey of India*, vol. xxxiv, pt. ii. The above account was contributed by Mr. E. Vredenburg, Deputy-Superintendent, Geological Survey of India.

the most important of the trees which clothe the hills and the undulating country in their neighbourhood are the *sāl* (*Shorea robusta*), *kend* (*Diospyros melanoxylon*), the black heart of which forms the ebony of local commerce, the *āsan* (*Terminalia tomentosa*), *palās* (*Butea frondosa*), *piār* (*Buchanania latifolia*), *gamhār* (*Gmelina arborea*), *gular* (*Ficus oppositifolia*), and *mahuā* (*Bassia latifolia*). Perhaps the most useful of all these trees is the *mahuā*, which yields food, wine, oil, and timber. From its flowers the common country spirit is distilled, and whether fresh or dried they furnish the poorer classes with wholesome food; from its fruit is pressed an oil largely used for the adulteration of *ghī*; and the tough timber is used for the naves of wheels.

Rope is made in large quantities from a jungle creeper called *chēhār* (*Bauhinia Vahlī*), and also from the coarse *sabai* grass (*Ischaemum angustifolium*). Lac is collected to a very small extent for exportation and for making bracelets, toys, &c. The insects are found chiefly on the small branches and petioles of the *palās*-tree (*Butea frondosa*). This tree also affords a valuable gum and a yellow dye of considerable permanence.

Tigers are not common, though they are said to have been responsible for sixty-nine deaths in 1900. Leopards, hyenas, and black bears are found in the hills, and wild hog in most parts of the District. Several varieties of deer are met with, such as the *sāmbār*, *chital* or spotted deer, and barking-deer. The 'ravine deer'—more properly the Indian gazelle (*Gazella bennetti*)—also occurs. The marshes in the north are visited during the cold season by myriads of geese, ducks, and cranes; and peafowl, jungle-fowl, and spur-fowl are still found in small numbers among the hills in the south of the District. These birds, however, like the larger wild animals, have now been nearly exterminated by hunters and the forest tribes.

The temperature is moderate except during the hot months of April, May, and June, when the westerly winds from India cause high temperature with very low humidity. The annual rainfall averages 47 inches, of which 6.9 inches fall in June, 13.2 in July, 11.9 in August, and 8 in September.

In the earthquake of 1897 considerable damage was done to masonry buildings at the head-quarters station and at Jamālpur.

In early times the present site of Monghyr town lay within the old Hindu kingdom of Anga, while some of the western part of the District appears to have been included within the

limits of the ancient kingdom of Magadha. There are still several traces of Buddhist remains in this portion of the District; and ruins at RAJAONĀ have been identified by General Cunningham with those of a monastery visited by the Chinese pilgrim Hiuen Tsiang. The District subsequently passed under the Pāl dynasty; and a relic of their rule still exists in a copperplate found on the site of the fort in 1780, which contains an inscription of uncertain date recording that the armies of Rājā Deb Pāl (tenth century A.D.) crossed the Ganges by a bridge of boats. The next mention of Monghyr is in connexion with the conquest of Bihār and Bengal by the Muhammadans, when Monghyr town was taken by Muhammad-i-Bakhtyār Khiljī (*circa* 1198). In 1580, when Rājā Todar Mal was sent by the emperor Akbar to reduce the rebellious chiefs of Bengal, he made Monghyr his head-quarters and constructed lines of entrenchment there. In the next century Shāh Shujā, after his defeat by Aurangzeb in 1659, retreated to Monghyr and strengthened the fortifications and outer lines of entrenchment, but hurriedly abandoned the fort on hearing that Mīr Jumla was threatening his line of retreat. Subsequently in 1763 the Nawāb, Mīr Kāsim Alī, selected the town as his capital and established an arsenal here. After the defeat of his army at Udhuā Nullah, he retreated to Monghyr, but fled on the approach of the British under Major Adams; and the governor of the fort capitulated after two days' bombardment.

The greater part of the present District, especially to the south of the Ganges, remained for some time in the hands of semi-independent chieftains, the most powerful of these being the Rājā of Kharagpur, who ruled at one time over 24 *parganas*. The founder of this family was a Rājput soldier of fortune, who overthrew the original Khetauri proprietors by an act of gross treachery; and in the reign of the emperor Jahāngīr his son and successor strengthened his position by embracing Islām and taking a wife from the imperial *zanāna*. The downfall of the line dates from the British occupation, when the ancestral estates were rapidly sold one after another for arrears of revenue, a large portion being bought by the Mahārājā of Darbhanga. Other ancient families are those of GIDHAUR and of the Rājās of Pharkiyā, the latter of whom trace their descent from a Rājput who first brought the lawless tribes of Dosādhs under subjection in the reign of Humāyūn, and subsequently received a *samīndārī* grant in 1494. Portions of the property still continue in his family, but the estate has been much broken up by subdivision and alienation. The

modern history of Monghyr will be found in the article on BHĀGALPUR DISTRICT, within which it was included in the earlier days of British administration. The local records do not give the date of the establishment of the District as a subsidiary executive circle, but this change appears to have been effected about the beginning of the nineteenth century. In 1832 Monghyr was made an independent Deputy-Collectorship and Joint-Magistracy, and the title of Magistrate and Collector was subsequently given to the District officer.

The District contains several remains of antiquarian interest. ^{Archaeo-} In addition to the great fort at Monghyr, there are the ruins of ^{logy.} other forts at Indpe (near Jamūi), Naulakhagarh near Khaira, Chakai, Jaimangalgarh in the Kābartāl, and Naula in the Begusarai subdivision. Buddhist remains are to be found at Rajaonā and Hasanganj near Luckeesarai, and at Uren near Kajra. There is an inscription of about the tenth century at Kashtharani Ghāt, and another referring to the Bengal Sultān Rukn-ud-dīn Kaikaus (1297) at Luckeesarai. The oldest extant building of the Muhammadan period is the *dargāh* of Shāh Nāfah, built in 1497-8 by Dāniyāl, son of Alā-ud-dīn Husain, king of Bengal.

The population increased from 1,814,638 in 1872 to 1,969,905 ^{The} in 1881, 2,036,021 in 1891, and 2,068,804 in 1901. ^{people.} The District is fairly healthy, though cholera is epidemic; and the falling off in the rate of progress indicated by the census returns is chiefly due to the appearance of plague in 1900, which, in addition to the consequent mortality, caused a large number of persons to leave the District.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages.				
Monghyr .	1,578	3	923	874,611	554	+ 0.4	26,875
Jamūi .	1,593	1	838	551,227	346	- 0.5	15,537
Begusarai .	751	...	755	642,966	857	+ 5.2	18,315
District total	3,922	4	2,516	2,068,804	527	+ 1.6	60,727

NOTE.—In 1904 and 1905 changes of jurisdiction were effected, with the result that the area of the Monghyr subdivision was increased to 1,805 square miles, and that of the Jamūi subdivision reduced to 1,276 square miles. The population of the subdivisions as now constituted is 1,050,840 and 374,998, and the density 555 and 294 persons respectively per square mile.

The density is greatest north of the Ganges, where there are

693 persons per square mile, as compared with only 412 persons in the south Gangetic tract, while in the extreme south, on the borders of Hazāribāgh, there are barely 250 persons per square mile. The greatest growth has occurred in the fertile Begusarai subdivision on the north of the Ganges; but the sparsely inhabited hilly *thānas* in the south-east also show a steady development. The four towns are MONGHYR, the headquarters, JAMĀLPUR, SHEIKHPURĀ, and KHAGARIĀ, the first two being municipalities. There is considerable emigration among the labouring classes, especially to Central and North Bengal and to Assam. The vernacular in the north is the Maithilī, and in the south the Māgadhī dialect of Bihārī. Hindus constitute 90.3 per cent. of the total population and Muhammadans 9.5 per cent.

Castes
and occu-
pations.

The most numerous Hindu castes are Ahīrs and Goālās (240,000), Bābhans (189,000), Dhānuks (132,000), Musahars (123,000), Dosādhs (115,000), and Koiris (110,000); while Brāhmans, Chamārs and Kāndus, Rājputs, Tāntis, and Telis have each more than 50,000 representatives. The Bābhans are for the most part occupancy ryots or tenure-holders. The Musahars, Dosādhs, and Chamārs may be considered semi-Hinduized aborigines. The Musalmāns are chiefly Shaikhs, Jolāhās, and Kunjras. Two-thirds of the population are supported by agriculture, 13.6 per cent. by industries, 1.1 per cent. by commerce, and 1.6 by the professions.

Christian
missions.

Christians number 1,433, of whom 423 are natives. The Baptist Mission, which is said to have been established at Monghyr in 1816, has stations at Begusarai and Luckeesarai. There are two European missionaries, and two European ladies also work among the native women. The United Free Church of Scotland opened a branch at Chakai in 1879, which works chiefly among the Santāls; the mission maintains a hospital, with a branch dispensary and several schools.

General
agricul-
tural con-
ditions.

The fertile plain north of the Ganges, from the boundary of Darbhanga District to the mouth of the Gandak, is almost entirely under cultivation, the chief crops being *bhadoi* and *rabi*. The depressed tract to the east of this grows fine *rabi* crops in some places and rice in others; but during the rains it is to a large extent inundated and uninhabited, and there are extensive tracts of pasture where herds graze in the dry and hot season. South of the Ganges the cultivated area lies chiefly in the basin of the Kiul and its tributaries, and in the Kharagpur *pargana*, where the largest area is under winter rice. The tract to the north of Sheikhpurā and west of

Luckeesarai, which is also liable to inundation, is nearly all devoted to *bhadoi* and *rabi*.

The chief agricultural statistics for 1903-4 are shown in the following table, in square miles :—

Chief agricultural statistics and principal crops.

Subdivision.	Total.	Cultivated.	Cultivable waste.
Monghyr* . .	1,578	749	116
Jamūi* . . .	1,593	119	67
Begusarai . .	751	556	83
Total	3,922	1,424	266

* Owing to changes of jurisdiction, the area of the Monghyr subdivision has subsequently been increased to 1,895 square miles, and that of the Jamūi subdivision has been reduced to 1,276 square miles.

About 67 per cent. of the cultivated area is estimated to be twice cropped.

In the Begusarai subdivision north of the Ganges, for which exact figures are available on account of the survey in progress, it has been found that in the Begusarai *thāna* 79 per cent. and in Teghrā 86 per cent. of the total area is cultivated. In both *thānas* maize is the most important crop, covering about one-fourth of the total. Wheat, gram, *maruā*, and barley are also extensively grown. Winter rice accounts for less than 10 per cent. of the land in Begusarai and less than 5 per cent. in Teghrā. Indigo is grown on 3 per cent. of the area in Begusarai and on 5 per cent. of that in Teghrā. In the whole District, rice is the crop most extensively grown, and it was estimated to cover 447 square miles in 1903-4. The chief variety is winter rice, which is raised for the most part south of the Ganges. Among other crops the poppy is important, but is cultivated only in the southern portion of the District; while tobacco is almost confined to the portion north of the Ganges.

Cultivation is extending chiefly in the low-lying lands of the Gogri *thāna*, where the recently constructed railway from Hajipur to Katihār has prevented inundation from the south. During the decade ending 1901-2 an average of Rs. 3,000 per annum was advanced under the Land Improvement Loans Act; these advances are granted chiefly for improving the means of irrigation. In the same period an average of Rs. 7,000 per annum was advanced under the Agriculturists' Loans Act, large loans being granted where necessary on account of the failure of the crops owing to drought or flood.

The cattle are generally small and inferior to the breeds Cattle.

in Patna and Shāhābād Districts. There is ample pasturage among the hills in the south during the rainy season, and on the grass lands of Pharkiyā in the dry season.

Irrigation. The only large irrigation work is in the Kharagpur estate of the Mahārājā of Darbhanga. While the estate was under the Court of Wards, a dam was built across the Man river about two miles above Kharagpur, by which water is banked up in a valley and thence distributed by irrigation channels over an area of about 28 square miles. This useful scheme, which cost less than 7 lakhs, has been chiefly instrumental in raising the rent-roll of the estate by more than 300 per cent., or from about Rs. 40,000 to nearly Rs. 1,30,000. Elsewhere in the southern portion of the District there are a few artificial irrigation channels taking off from hill streams, but the principal method of irrigation consists in storing water in artificial reservoirs, known as *āhars*. Wells are also used for irrigation purposes north of the Ganges, where artificial irrigation is little required as the country is subject to inundation during the rains.

Fisheries. The fisheries in the Ganges and Gandak and in the large *jhils* lying in the Pharkiyā *pargana* are very extensive, and the supply of fish is abundant during the greater part of the year. There is an extensive trade in the shells of the fresh-water mussel (*Unio*) and marsh snail (*Ampullaria*), which are collected in tons in the Pharkiyā marshes and, when burned, yield a very pure lime.

Minerals. Minerals are entirely confined to the tract lying south of the Ganges. Galena, a sulphuret of lead containing a small quantity of silver, is found in the hill tracts of the Chakai *pargana*, and minium or protoxide of lead in the beds of the Kharagpur hill streams. Mica occurs in the belt of schists and gneissose granite which stretches north-eastwards from Gayā District to near Nawādhī (Jhā-Jhā) on the East Indian Railway. In 1903-4 four mines were worked, with an output of 227 tons. Iron ores are found in the schists of the Kharagpur hills, and in several places ochreous ores are employed as pigments. Slates are quarried near Jamālpur, the output in 1903-4 being 213 tons; and stone quarries are also worked. Felspar fit for the manufacture of porcelain occurs in abundance in the south of the District. Corundum is obtained from the hills near Jamūī, but the precious forms are not met with. Travertine is found near Gidhaur and in the Kharagpur hills.

**Arts and
manufac-
tures.**

Monghyr town has long been famous for its manufacture of firearms, which was introduced when there was a Musalmān

garrison in the fort. A serviceable double-barrelled gun can be obtained at Monghyr for Rs. 30, a single-barrelled gun for Rs. 15, and a large double-barrelled pistol for the same sum. Swords and iron articles of various kinds are also made, but of no special excellence. Cotton-weaving is largely carried on; and there are a few dyers and calico printers, the centre of the latter industry being Sheikhpurā. Coarse blankets are woven by a few families of Gareris. Among other minor industries may be mentioned cabinet-making and boat-making, soap-boiling, making porous water-bottles of clay, carving *lingams* or emblems of Siva out of chlorite, basket-weaving, and straw work. Sticks, jewellery cases, and other articles are made of ebony and inlaid with ivory or bone. Imitation fish are made of silver and used as caskets and scent phials. Sheikhpurā is noted for its manufacture of tubes for the *hukka* or native pipe. The East Indian Railway Company's works at Jamālpur are the largest manufacturing workshops in India, employing over 9,000 hands. All the constituent parts of a locomotive can now be constructed there, and railway material of all descriptions is manufactured from malleable iron, cast iron, and steel. The manufacture of indigo has declined, the out-turn of dye in 1903-4 being 85 tons. The Gidhaur *gur* (raw sugar) from the Jamūi subdivision has a special reputation, and generally sells at higher prices than that manufactured in other places. Aerated water is made from various mineral springs.

The District is favourably situated for trade by both rail and Commerce. river. The most important river marts are Khagariā on the Gandak, and Simariā, Monghyr, and Gogri on the Ganges. Barhiyā, Luckeesarai, Jamālpur, Sheikhpurā, and Bariārpur are the chief centres of trade on the railway, while a considerable volume of traffic passes via Tārāpur to Sultānganj station in Bhāgalpur District. The chief articles of import are piece-goods, coal and coke, rice, and sugar. The exports consist mainly of agricultural produce, the chief items being gram and pulses, linseed, wheat, mustard, rapeseed, chillies, and tobacco leaf. There is a considerable export of raw sugar, and an equal import of refined sugar; *għā* also is largely exported. The chief trading castes are the local Baniyās, but there are many Mārwaris in the towns and larger villages.

South of the Ganges the loop-line of the East Indian Railway Railways
and roads. (broad gauge) passes through the District from east to west, and the chord-line from north-west to south-east, while the South Bihār Railway runs through the Sheikhpurā *thāna* west-

wards to Gayā. The Katihār-Hājipur section of the Bengal and North-Western Railway (metre gauge) traverses the tract north of the Ganges from east to west. The District board maintains 95 miles of metalled and 1,471 miles of unmetalled roads, including 194 miles of village tracks. The most important roads are: the Tirhut road running westwards from the north bank of the Ganges opposite to Monghyr town, the Monghyr-Bhāgalpur and Monghyr-Patna roads, and the roads from Bariārpur to Kharagpur, and from Luckeesarai to Sheikhpurā and to Jamūi. The District board controls 56 ferries.

Water
communi-
cations.

The Ganges, which intersects the District from west to east for 70 miles, is navigable at all seasons by river steamers and the largest country boats; and a considerable river traffic is carried on. The steamers of the India General and River Steam Navigation Companies convey goods and passengers to places between Calcutta and Patna. The East Indian Railway has also a steamer service between Monghyr, Mansi, and Gogri, and a ferry service across the Ganges opposite Monghyr in connexion with the Bengal and North-Western Railway. The Little Gandak and Tiljūgā are navigable all the year round, but only small craft of 10 tons burden can ply on them in the hot season. During the rains a large portion of the northern part of the District remains under water, and boats are then largely used as a means of communication.

Famine.

The famine of 1865-6 was severely felt in the south-west of the District, and a large number of deaths occurred from starvation and diseases engendered by want. In 1874 another failure of the rice crop threatened famine, which was, however, averted by the facilities for importation afforded by the railway and by the relief which Government provided on a lavish scale; the total expenditure on this occasion amounted to 23.30 lakhs, of which the larger portion consisted of advances. The crops were again short in 1891, especially in the north of the District, and relief works were open for some months. They were resorted to only by a small proportion of the population, and the number on relief at no time rose above 2,171. In 1896-7 the poor suffered from the high prices consequent on famine elsewhere, but the crops were fairly good.

District
subdivi-
sions and
staff.

For administrative purposes the District is divided into three subdivisions, with head-quarters at MONGHYR, JAMŪI, and BEGUSARAI. The District Magistrate-Collector is usually assisted at head-quarters by a staff consisting of a Joint-

Magistrate and six Deputy-Magistrate-Collectors ; while the subdivisions of Begusarai and Jamūi are each in charge of a Joint-Magistrate.

Subordinate to the District Judge for the disposal of civil suits are a Sub-Judge and five Munsifs, of whom two sit at Monghyr, two at Begusarai, and one at Jamūi. Criminal courts include those of the District and Sessions Judge, who is also Judge of Bhāgalpur, and the above-mentioned magistrates. Riots are a very common form of crime, due generally to disputes about land ; burglaries are numerous, and dacoities are occasionally committed.

Sarkār Monghyr, assessed by Todar Mal at 7·41 lakhs, appears to have embraced areas not included within the present Monghyr District, and to have been almost entirely unsubdued ; it was probably also largely unexplored. At the time of the British accession to the Diwāni in 1765 it was assessed to a net revenue of 8·08 lakhs, and covered 8,270 square miles. It is not, in fact, practicable to institute any comparison between the present revenue of Monghyr District and the figures for years earlier than 1850, as till that year the land, excise, and other revenue was for the most part paid into the Bhāgalpur treasury, and the accounts were not kept separately. Subdivision of landed property has gone on rapidly ; the number of estates in 1903-4 amounted to 8,027, of which 7,916 with a current demand of 7·77 lakhs are permanently settled, 65 with a demand of Rs. 52,000 are temporarily settled, and 46 with a demand of Rs. 72,000 are held direct by Government. Owing to the backward condition of the country at the time of the Permanent Settlement, the incidence of the land revenue is very low, amounting to only 10 annas per cultivated acre, or less than 18 per cent. of the rental. Survey and settlement operations have been completed in the portion of the District north of the Ganges and in the Government estates south of that river. Occupancy holdings average 1·75 acres in the Begusarai *thāna*, where there are large *diāra* holdings and *jhils*, and 1·35 acres in Teghrā ; and the average rent is Rs. 3-14-7 per acre in Begusarai, compared with Rs. 3-6-2 in Teghrā. For the whole District the incidence of rental per cultivated acre is about Rs. 5-10-9. In the south the tenure known as *bhaoli* is common ; under this system the tenant pays a rent in kind equal to a certain proportion of the out-turn in each year, which is usually one-half the produce.

The following table shows the collections of land revenue

and of total revenue (principal heads only), in thousands of rupees :—

	1880-1	1890-1	1900-1	1903-4
Land revenue . .	8,87	8,97	8,82	9,00
Total revenue . .	15,53	17,71	20,70	22,28

Local and municipal government.

Outside the municipalities of Monghyr and Jamālpur, local affairs are managed by the District board, with the assistance of local boards in each subdivision. In 1903-4 its income was Rs. 3,41,000, of which Rs. 1,58,000 was derived from rates; and the expenditure was Rs. 3,13,000, the chief item being Rs. 2,11,000 spent on public works.

Police and jails.

The District contains 18 police stations and independent outposts. In 1903-4 the force subordinate to the District Superintendent consisted of 3 inspectors, 33 sub-inspectors, 34 head constables, and 415 constables. There was, in addition, a rural police of 310 *daffadārs* and 3,599 *chaukidārs*. The District jail at Monghyr has accommodation for 274 prisoners, and subsidiary jails at Jamūi and Begusarai for 72.

Education.

The great majority of the population are illiterate, only 2.9 per cent. (5.8 males and 0.2 females) being able to read and write in 1901. The number of pupils under instruction decreased from 30,617 in 1882-3 to 25,449 in 1892-3, after which there was a large increase; but it again declined to 25,738 in 1900-1, when the attendance fell off very greatly owing to the outbreak of plague. In 1903-4, 28,752 boys and 2,841 girls were at school, being respectively 18.9 and 1.7 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,326: namely, one Arts college, 22 secondary, 1,025 primary, and 278 special schools. The most important of these are the Diamond Jubilee College and the District school in Monghyr town, and the high schools at Begusarai and Jamūi. Among aborigines a few Santāls in the south attend primary schools. The expenditure on education was 1.33 lakhs, of which Rs. 9,000 was met from Provincial funds, Rs. 42,000 from District funds, Rs. 4,000 from municipal funds, and Rs. 60,000 from fees.

Medical.

In 1903 the District contained 13 dispensaries, of which 6 had accommodation for a total of 132 in-patients. The cases of 80,000 out-patients and 1,200 in-patients were treated during the year, and 5,503 operations were performed. The expenditure was Rs. 32,000, of which Rs. 800 was met from Govern-

ment contributions, Rs. 12,000 from Local and Rs. 5,000 from municipal funds, and Rs. 10,000 from private subscriptions.

Vaccination is compulsory only in municipal areas. In 1903-4 the number of persons successfully vaccinated was 76,000, representing 37.9 per 1,000 of the population. ^{tion.}

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. ii (1838); Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xv (1877).]

Monghyr Subdivision.—Head-quarters subdivision of Monghyr District, Bengal, lying between 24° 57' and 25° 49' N. and 85° 36' and 86° 51' E., with an area of 1,895 square miles. The subdivision is divided into two portions by the Ganges. The northern portion is a low, but fertile, alluvial plain; the south is also to a great extent alluvial, but the general level is higher and the surface more undulating, and it contains hill ranges which gradually converge towards Monghyr town. The population in 1901 was 874,611, compared with 870,755 in 1891, the density being 554 persons per square mile. At the time of the Census it comprised an area of 1,578 square miles, but the Sheikhpurā *thāna* was subsequently transferred to it from the Jamūi subdivision. The population of the subdivision as now constituted is 1,050,840, and the density 555 persons per square mile. It contains four towns, MONGHYR (population, 35,880), the head-quarters, JAMĀLPUR (13,929), KHAGARIĀ (11,492), and SHEIKHPURĀ (10,135); and 1,262 villages. The chief centres of trade are Monghyr town and Khagariā. The head-quarters of the locomotive department of the East Indian Railway are situated at Jamālpur. Kiul near LUCKEESARAI is an important railway junction.

Jamūi Subdivision.—Southern subdivision of Monghyr District, Bengal, lying between 24° 22' and 25° 7' N. and 85° 49' and 86° 37' E., with an area of 1,276 square miles. The population in 1901 was 551,227, compared with 553,917 in 1891. At the time of the Census it comprised an area of 1,593 square miles, but the Sheikhpurā *thāna* was subsequently transferred to the Monghyr subdivision. The population of the subdivision as now constituted is 374,998. It contains 499 villages, of which JAMŪI is the head-quarters. The subdivision, which in the south merges in the Chotā Nāgpur plateau, contains large areas of jungle, and supports only 294 persons per square mile, being the least densely populated part of the District. Jamūi is an important centre of trade. GIDHAUR and Khaira are the present seats of the two senior branches of the Gidhaur family.

Begusarai Subdivision.—North-western subdivision of Monghyr District, Bengal, lying between $25^{\circ} 15'$ and $25^{\circ} 47'$ N. and $85^{\circ} 47'$ and $86^{\circ} 27'$ E., with an area of 751 square miles. The population in (1901) was 642,966, compared with 611,349 in 1891. It contains 755 villages, but no town; the head-quarters are at BEGUSARAI. The subdivision, which forms a continuation of the fertile alluvial plain of Tirhut, and supports 857 persons per square mile, is the most densely populated part of the District. The cultivation of indigo is carried on, but the industry is declining.

Begusarai Village.—Head-quarters of the subdivision of the same name in Monghyr District, Bengal, situated in $25^{\circ} 26'$ N. and $86^{\circ} 9'$ E. Population (1901), 9,338. The village contains the usual public offices; the sub-jail has accommodation for 28 prisoners.

Gidhaur.—Village in the Jamū subdivision of Monghyr District, Bengal, situated in $24^{\circ} 51'$ N. and $86^{\circ} 12'$ E. Population (1901), 1,780. Gidhaur is the present seat of one of the oldest of the noble families of Bihār. Their original home was at the foot of the hills near the village of Khaira; and the ruins of an old stone fort and other buildings may still be traced in the scrub jungle there. Close by are the remains of a large masonry fort, known as Naulakhagarh, the erection of which is ascribed by local tradition to Sher Shāh, but which may once have been the seat of the family. The founder was Bīr Bīkram Singh, a Rājput who emigrated from his home in Central India about the thirteenth century, and, after slaying a local Dosādh ruler who held sway over large estates in the neighbourhood, established the Gidhaur Rāj. Rājā Pūran Mal, eighth in descent from Bīr Bikram Singh, built the great temple of Baidyanāth. The present head of the family is Sir Rāvaneswar Prasād Singh, K.C.I.E.

Jamālpur Town.—Town in the head-quarters subdivision of Monghyr District, Bengal, situated in $25^{\circ} 19'$ N. and $86^{\circ} 30'$ E., at the foot of the Monghyr hills, on the loop-line of the East Indian Railway, 299 miles from Calcutta. The population at the Census of March, 1901, was 13,929, compared with 18,089 in 1891; but a second enumeration eight months later disclosed a population of 16,302. The decrease on the first occasion was chiefly due to many persons having left the town on account of plague; but subsidiary causes were the transfer of the audit department of the East Indian Railway to Calcutta and the introduction of workmen's trains from the neighbouring stations, owing to which many of the

workmen have settled outside the town. Jamālpur is the head-quarters of the locomotive department of the East Indian Railway, and contains the largest manufacturing workshops in India. Locomotives are put together, and railway material of all descriptions is made from malleable iron, cast iron, and steel. The works cover an area of 99 acres, and employ about 230 Europeans and 9,000 native mechanics and labourers. Jamālpur was constituted a municipality in 1883. The income and expenditure during the decade ending 1901-2 averaged Rs. 20,000. In 1903-4 the income was Rs. 25,000, mainly derived from a tax on houses and lands and a conservancy rate; and the expenditure was Rs. 22,000. There is no municipal water-supply, but the workshops obtain a supply from reservoirs constructed at the base of the hills. Jamālpur contains an Institute, comprising a library, reading and billiard-rooms, an entertainment hall, and a swimming bath; also a church and aided schools for Europeans and natives.

Jamūi Village.—Head-quarters of the subdivision of the same name in Monghyr District, Bengal, situated in $24^{\circ} 55' N.$ and $86^{\circ} 13' E.$, on the left bank of the Kiul river, 4 miles south-west of Jamūi station on the East Indian Railway, with which it is connected by a metalled road. Population (1901), 4,744. It contains the usual public offices, a *munsifī*, a sub-jail with accommodation for 51 prisoners, and a higher-class English school. *Mahuā* flowers (*Bassia latifolia*) and oil, *ghī*, shellac, oilseeds, grain, and *gur* are exported; and cotton, tobacco, piece-goods, and metal vessels are imported. Trade is carried on by rail and by pack-bullocks. To the south of the village are the remains of an old fort, known as Indpegarh.

Khagariā.—Town in the head-quarters subdivision of Monghyr District, Bengal, situated in $25^{\circ} 30' N.$ and $86^{\circ} 29' E.$, on the Gandak. Population (1901), 11,492. Khagariā is a station on the Bengal and North-Western Railway and possesses a large trade.

Kharagpur.—Village in the head-quarters subdivision of Monghyr District, Bengal, situated in $25^{\circ} 7' N.$ and $86^{\circ} 33' E.$ Population (1901), 2,442. The *pargana* named after it now forms part of the estates of the Mahārājā of Darbhanga. The village is best known for its irrigation works. These consist of a dam across the Man river, by which its water is banked up in a valley in the hills, and about 28 square miles in the possession of the Rāj tenants are irrigated.

Luckeesarai (Lakshmīsarai).—Village in the head-quarters subdivision of Monghyr District, Bengal, situated in $25^{\circ} 11' N.$

and $86^{\circ} 6' E.$, on the west bank of the Kiul river. Population (1901), 6,199. A broad handsome railway bridge here crosses the Kiul river, and Kiul station on its east bank forms the junction of the chord-line of the East Indian Railway with the loop-line and with the South Bihār Railway. Numerous sculptures found at the neighbouring village of Rajaonā have been removed to the Indian Museum at Calcutta; the remains of a *stūpa* still exist.

Monghyr Town (*Mungīr*).—Head-quarters of Monghyr District, Bengal, situated in $25^{\circ} 23' N.$ and $86^{\circ} 28' E.$, on the south bank of the Ganges. The origin of the name is very uncertain. It is said that the place was formerly called Madgalpur, or Madgalāsrām, from its having been the abode of Madgal Muni, a hermit saint who lived in early Hindu times. Another explanation, founded on the authority of the *Harivansa*, derives the name from a certain Madgal Rājā, one of the sons of Visvāmitra, son of a Gādhi Rājā, who received this part of his father's dominions. Dr. Buchanan-Hamilton states that on an inscription seven or eight centuries old, found at Monghyr and perhaps more ancient than the *Harivansa*, the name is written Madgagiri, or 'the hill of Madga,' and not Madgalpurī, or 'the abode of Madgal.' The existence, therefore, of both the saint and the prince is very doubtful. Possibly the original name was Munigriha, 'the abode of the *muni*,' and was corrupted into Mungīr, in the same way as Rājagriha has been corrupted into Rājgīr.

Tradition assigns the foundation of the town to Chandra Gupta, after whom it was called Guptagarh, a name which has been found inscribed on a rock at Kashtharani Ghāt at the north-western corner of the present fort. A copperplate found on the site of the fort in 1780 contains an inscription of uncertain date, recording that the armies of Rājā Deb Pāl here crossed the Ganges by a bridge of boats; the date usually assigned to Deb Pāl is the tenth century. Monghyr is first mentioned by Muhammadan historians as having been taken by Muhammad-i-Bakhtyār Khiljī, during the conquest of Bihār, about 1198; and henceforth it is often referred to as a place of military importance. Prince Dāniyāl, son of Alā-ud-dīn Husain, the Afghān king of Gaur, repaired the fortifications in 1497 and built a vault over the tomb of Shāh Nāfah, the Muhammadan patron saint of the town; and in 1580 Rājā Todar Mal, on being deputed by Akbar to reduce the rebellious Afghān chiefs of Bengal, made Monghyr his head-quarters and constructed entrenchments between the Ganges and the

hills. Shāh Shujā, after his defeat by Aurangzeb near KHAJUĀ, retreated here in 1659, and, resolving to make a stand against the imperial troops, strengthened the fortifications and threw up lines of entrenchment; on learning, however, that Mīr Jumla had got round to his rear by forced marches through the hills of Jhārkand, he hurriedly withdrew his troops from the trenches and beat a retreat to Rājmahāl. In the next century, when the Nawāb, Mīr Kāsīm Alī, determined on war against the British, he selected Monghyr as his capital in 1763, and established an arsenal under the supervision of his Armenian general, Ghurgin (Gregory) Khān: the gun-making industry for which the town is famous is said to date from the establishment of this arsenal. He retreated here after the defeat of his army at Udhuā Nullah, but fled on the approach of the British troops under Major Adams; and the governor who was left in command of the fort capitulated after a two days' bombardment. A spot by the side of the fort is still pointed out as the scene of the memorable outrage, when the two Seths, the great Hindu bankers of Murshidābād, were thrown into the Ganges on a charge of favouring the British cause. Monghyr has been a place of considerable importance since the earliest days of the British occupation of Bengal, although it did not become a civil station until 1812; and the old Musalmān fort was once occupied by a regiment of the East India Company.

At present Monghyr is a purely civil station, and in some respects one of the most picturesque in Bengal. It consists of two distinct portions—the fort, within which are situated the public offices and residences of the Europeans; and the native town, stretching away from the former eastward and southward along the Ganges. The fort is formed by a great rampart of earth enclosing a rocky eminence, and is faced with stone. It was probably at one time a strong position; towards the west the river comes up to the walls, forming a natural defence, while to the landward a deep wide ditch surrounds and protects it.

The population fell from 59,698 in 1872 to 55,372 in 1881; it rose again to 57,077 in 1891, but dropped to 35,880 in 1901, when it included 26,715 Hindus and 8,950 Muhammadans. The decrease on the last occasion was due to the fact that plague was raging severely in the town at the time when the Census was taken, and that a large number of the inhabitants had temporarily left to escape its ravages. A second enumeration, taken at the end of July when plague had dis-

appeared, gave a population of 50,133. The town is favourably situated for trade by both rail and river, formerly the trade was carried almost exclusively by river, but the greater part has been diverted to the railway. It is connected by a short branch with the loop-line of the East Indian Railway, and by a steam ferry with the railway system on the north of the Ganges.

Monghyr was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged Rs. 64,000, and the expenditure Rs. 60,000. In 1903-4 the income was Rs. 73,000, including Rs. 23,000 derived from a tax on houses and land, Rs. 13,000 from tolls, Rs. 10,000 from a conservancy rate, Rs. 3,000 from a tax on vehicles, &c., Rs. 7,000 from revenue from municipal property and interest on investments, and Rs. 12,000 as grants from various sources. The incidence of taxation was nearly R. 1 per head of the population. In the same year the expenditure amounted to Rs. 68,000, the chief items being Rs. 1,500 spent on lighting, Rs. 6,000 on drainage, Rs. 21,000 on conservancy, Rs. 13,000 on medical relief, Rs. 8,000 on roads, and Rs. 3,000 on education. A drainage scheme and a project for providing a filtered water-supply are under consideration.

Rajaonā.—Village in the head-quarters subdivision of Monghyr District, Bengal, situated in 25° 12' N. and 86° 5' E., 2 miles north-west of Luckeesarai railway station. Population (1901), 388. According to Cunningham, Rajaonā is the site of the Lo-in-ni-lo monastery visited by Hiuen Tsiang. Some fine Buddhist sculptures found here have been removed to the Indian Museum at Calcutta.

[*Archaeological Survey of India*, vol. i, pp. 151-6, and vol. xv, pp. 13-5.]

Sheikhpurā (*Shaikhpurā*).—Town in the head-quarters subdivision of Monghyr District, Bengal, situated in 25° 8' N. and 85° 51' E. Population (1901), 10,135. It is on the South Bihār Railway and is an important centre of the grain trade. Tubes for *hukkas* are manufactured.

Sitākund.—Hot springs in the head-quarters subdivision of Monghyr District, Bengal, situated 4 miles east of Monghyr town. The springs, which are enclosed in masonry reservoirs, are visited by large numbers of pilgrims each year, especially at the full moon of Māgh.

Boun-
daries, con-
figuration,
and hill

Bhāgalpur District (*Bhaglipur*, meaning the 'city of good luck' or 'the city of refugees').—Central District of the Division of the same name, lying between 24° 33' and 26° 34'

N. and $86^{\circ} 19'$ and $87^{\circ} 31'$ E., with an area of 4,226 square miles. It is bounded on the north by Nepāl, on the east, north of the Ganges, by the District of Purnea; on the south and east, south of the Ganges, by the Santāl Parganas; and on the west by the Districts of Darbhanga and Monghyr.

The District is divided into two nearly equal parts by the Ganges. The northern half forms a continuation of the great alluvial plain of Tirhut, being intersected by many rivers which are connected with each other by numerous *dhārs* or watercourses. The southern and eastern portions of this tract are liable to inundation by the flooding of these rivers and by the overflow of the Ganges on its northern bank. The north-eastern part of the District, which was formerly one of the most fertile regions in the sub-*tarai* rice tract, has been devastated by the changes in the course of the Kosi river. On the south of the Ganges the land is low, but about 20 miles south of Bhāgalpur town it rises gently till it merges in the hilly country of the Chotā Nāgpur plateau.

The river system consists of a reach of the Ganges, about 60 miles in length, with numerous Himālayan affluents on its north bank and a few hill streams on the south, which become in the rains large rivers, but for the rest of the year are sandy watercourses; of the latter, the only stream worthy of mention is the Chāndan. The northern rivers, of which the most important are the Tiljūgā, Batī, Dimrā, Talabā, Parwān, Kosi, Dhusān, Chalaunī, Loran Katnā, Daus, and Ghugri, run mostly from north to south with a slightly eastward tendency. The larger of them rise in Nepāl at the foot of the Himālayas and fall into the Ghugri, which in its turn joins the Kosi 6 miles from the confluence of that river with the Ganges at Colgong. The two most important rivers, the Kosi and the Ganges, have changed their courses in the past and are liable to change them again in future. The channel of the Kosi has been steadily advancing westward; and the large trading village of Nāthpur, which in 1850 lay some miles west of the river, has been swept away and its site now lies many miles east of it. There are no lakes in Bhāgalpur, but shallow marshes are numerous. Large tracts of land are flooded every year in the rains, and, as they dry up, are cultivated and are very fertile.

The geological formations represented are the Archaean, the Gondwāna, and the Gangetic alluvium. Throughout the greater part of the District the older rocks are almost entirely concealed by alluvium. In the south the Archaean rocks rise above the level of the alluvial plain, and consist partly of

crystalline rocks of varied constitution, belonging to the division designated 'Bengal gneiss,' partly of a very ancient series of altered stratified rocks, not unlike the Dhārwar schists of Southern India. Along the southern banks of the Ganges various rocks are exposed in detached spurs and outlying prolongations of the Rājmahāl hills. Some small islands of an exceptionally granitoid gneiss occur in the Ganges at Colgong. The remaining exposures belong to the Gondwāna series. The hills at Pīrpainti consist of basic volcanic rocks of the Rājmahāl group, which belongs to the Upper Gondwāna; those at Patharghāta, north-east of Colgong, of Dāmodar rocks belonging to the lower coal-bearing series. The latter contain siliceous white clays suitable for the manufacture of many articles of hard pottery, and have been unsuccessfully explored for coal¹.

Botany. The north of the District is covered in places by deposits of sand left by the Kosi, on which nothing grows except high jungle grass; but the greater part consists of fertile land. South of the Ganges the soil is rich and covered with crops, and mango and palm groves abound. The latter, however, practically cease in the rising ground 20 miles south of Bhāgalpur town, and mangoes grow only in scattered groups, the *mahuā*-tree (*Bassia latifolia*) here becomes common, the red cotton-tree (*Bombax malabaricum*) attains a great size, and patches of *dhāk* jungle (*Butea frondosa*) appear, interspersed with large trees, the most important being the *sāl* (*Shorea robusta*), the *āmnūs* or Indian ebony, and *Terminalia*.

Fauna. The sloth or Indian bear (*Melursus ursinus*) occurs in the south of the District; it is usually harmless unless attacked. Tigers are found occasionally in the high grass jungles of the Kosi in the north-east, and leopards in the hilly country to the extreme south of the District, while several species of wild cat are met with, including the palm civet or 'toddy cat' (*Paradoxurus niger*), so called from its alleged habit of drinking the juice of the palmyra palm. Wild hog are found in all parts of the District, but are most common north of the Ganges, where they do considerable damage to the crops and are used by the lower castes for food.

Climate, temperature, and rainfall. The climate is pleasant and healthy. In the south the summer months are very hot, but in the extreme north the climate is cool throughout the year. Mean temperature varies from 62° in January to 89° in May. The highest average

¹ This account was contributed by Mr. E. Vredenburg, Deputy-Superintendent, Geological Survey of India.

maximum is 97° in April. The annual rainfall averages 51 inches, of which 8.5 inches fall in June, 13.1 in July, 11.7 in August, and 9.3 in September. Rainfall is fairly evenly distributed over the whole area, but the average is rather higher towards the north.

The earthquake of 1897 caused considerable damage in Bhāgalpur town, but only one life was lost. In September, 1899, the eastern part of South Bhāgalpur, including the country about Colgong, suffered very severely from a heavy flood. Owing to a cyclonic cloud-burst, the Chāndan river rose in flood, broke its embankments, and flooded all the country in the neighbourhood of Ghogā, while the railway bridge near Ghogā was washed away; altogether about 1,800 lives were lost and 25,000 houses destroyed. In 1906 serious distress was caused by floods in the extreme west of the Madhipurā and Supaul subdivisions, the crops being entirely destroyed in parts of the former; and there was also some distress in the head-quarters subdivision between the Ganges and Tiljūgā. Natural calamities.

Historically there is little of interest in the annals of Bhāgalpur until the later Musalmān times. The town of Bhāgalpur is occasionally referred to in the *Akbarnāma*, and in the *Ain-i-Akbarī* it is mentioned as the chief town of *mahāl* or *pargana* Bhāgalpur, which was assessed at Rs. 1,17,403. Akbar's troops are known to have marched through it when invading Bengal in 1573 and 1575; and in the second war against the Afghāns, Mān Singh made Bhāgalpur the rendezvous of all the Bihār contingents which in 1591 were dispatched thence to Burdwān before the invasion of Orissa. The town was subsequently made the seat of an imperial *faujdār* or military governor. History.

When the East India Company assumed the *Diwāni* of Bengal (1765), Bhāgalpur District formed the eastern part of the Muhammadan *sarkār* of Monghyr, and lay, with the exception of one *pargana*, to the south of the Ganges. At that time the country to the south and west was so unsettled, owing to the inroads of hill tribes, that the exact boundaries of the District in those directions cannot be determined; and it was not until 1774 that an officer was specially deputed to ascertain its limits. Till 1769 the revenue and criminal jurisdiction continued in native hands; but at the end of that year an English Supervisor was appointed, who lived at Rājmahāl and whose duties were 'to obtain a summary history of the provinces, the state, produce, and capacity of the lands, the amount of the revenues, the cesses, and all demands whatsoever which

are made on the cultivators, the manner of collecting them, and the gradual rise of every new impost, the regulation of commerce, and the administration of justice.' In 1772, when the Company took the management of the revenue into its own hands, it was found that during the previous seven years more than 5 lakhs of land revenue had been embezzled annually. Measures were at once taken to put the collections on a more satisfactory footing, and the *samīndārs* were ordered to live on their estates and attend to the collection of their rents, and were imprisoned if they fell into arrears. The Collector next turned his attention to the administration of criminal justice. The ravages of the marauding hill tribes in the south had become so serious that, in December, 1777, and January, 1778, 44 villages were plundered and burned, and in May, 1778, the hillmen actually carried off some of the Collector's tents within a few miles of Bhāgalpur town. Property and life were insecure, and it became a matter of supreme importance to pacify these hill tribes. In conjunction with Captain James Brown of Rājmaḥāl, Augustus Cleveland, at that time Collector of the District, carried out a scheme which resulted in 1780 in the pensioning of the hill chiefs. From this time matters improved; and though the ravages of the hillmen did not at once cease, the prompt measures which followed upon each inroad at length produced the desired effect, and the country became finally free from attack.

There have been many changes of jurisdiction in the District, and it has lost little by little the character of a South Gangetic tract which it had when it first came into British possession. A stretch of 700 square miles on the north of the river was added to it in 1864, and a further important transfer was made in 1874, when the Kharagpur *pargana* was separated from Bhāgalpur and added to Monghyr District.

Archaeology.

The most interesting archaeological remains are at MANDĀRGIRI; there are rock sculptures at JAHĀNGĪRA and PATHARGHĀTA, a rock temple at COLGONG, and the remains of Buddhist monasteries at SULTĀNGANJ. The Bīrbandh, an embankment running for 20 miles along the west bank of the Daus river in the north, is usually represented as being a fortification erected by a prince named Bīr—a supposition favoured by the fact that the Daus is at present an insignificant stream which does not need embanking. At one time, however, the river was possibly much larger, and it may be that the Bīrbandh was raised to restrain its overflow. At Champanagar near Bhāgalpur town are two remarkable places of worship

belonging to the Jain sect of Oswāls, one of them erected by the great banker of the eighteenth century, Jagat Seth; and also the mausoleum of a Muhammadan saint, Makhdūm Shāh, the inscription on which states that it was erected in 1615 by Khwāja Ahmad Samarkandi, *faujdar* of *sarkār* Monghyr. Other objects of interest near the town are the KARANGARH plateau, which formerly contained the lines of the Hill Rangers (a regiment embodied by Cleveland about 1780), and a monument erected to the memory of Cleveland by the landholders of the District.

The population of the present area increased from 1,826,038 The people. in 1872 to 1,967,635 in 1881, 2,032,696 in 1891, and 2,088,953 in 1901. The District is generally healthy, but the Kishanganj *thāna* and parts of Madhipurā bordering on the Kosi are notoriously malarious. Cholera usually occurs in localized epidemics from April to June and August to October; it was very severe and widespread in 1900. Deaf-mutism is prevalent in the Colgong, Bihpur, and Bhāgalpur *thānas* which adjoin the Ganges, and in the Supaul subdivision on the right bank of the Kosi.

Details of the population in 1901 are given below :—

Subdivision	Area in square miles	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages				
Bhāgalpur .	934	2	830	585,244	627	+ 6.0	30,675
Bānka .	1,182	.	994	433,499	367	+ 2.4	13,117
Madhipurā .	1,176	.	757	559,310	476	+ 2.8	12,791
Supaul .	934	.	482	510,900	547	- 6.1	12,677
District total	4,226	2	3,063	2,088,953	494	+ 2.8	69,260

The two towns are BHĀGALPUR, the head-quarters, and COLGONG. The population is not so dense as in the Districts to the west, a fact which may be ascribed to a less fertile soil and less healthy climate, combined in the Madhipurā subdivision, where there has been an actual loss of population, with occasional floods from the Kosi which leave behind them a barren sediment of sand. There is a considerable gain by immigration from the Districts on the west and the United Provinces, which is more than counterbalanced by large emigration to Purnea and the Santāl Parganas. The vernacular spoken is the Maithilī dialect of Bihārī; in the south a sub-dialect known as Chhikā Chhikī *bolī* is used. Hindus number 1,875,309,

or 89·8 per cent. of the total population, and Muhammadans 209,311, or 10 per cent.

Castes
and occu-
pations.

Among Hindus the most numerous castes are the Ahīrs and Goālās (367,000), Dhānuks (103,000), Musahars (94,000), Chamārs (90,000), Koiris (89,000), Tāntis (80,000), and Dosādhs (79,000), while other functional castes are also well represented. Being bounded by the Nepāl *tarai* on the north and the Santāl Parganas on the south, the District contains a large aboriginal element, and the Musahars, Chamārs, and Dosādhs consist almost entirely of semi-Hinduized aborigines. Gangautās (56,000, chiefly in the head-quarters subdivision) and Gonrhīs (49,000, chiefly in the Supaul subdivision) are more common here than elsewhere; and there are 27,000 Santāls, mostly in the *thānas* bordering on the Santāl Parganas. Of the Muhammadans 92,000 are Shaikhs, but Jolāhās and Kunjrās are also numerous. Agriculture supports 68·6 per cent. of the population, industries 10·7 per cent., commerce 1·2 per cent., and the professions 0·9 per cent.

Christian
missions.

Two missionaries of the Church Missionary Society, stationed at Champanagar, a few miles from Bhāgalpur town, work in Bhāgalpur, Purnea, and Monghyr Districts. There is also an independent mission at Jaypur in the south of the District, and Bhāgalpur is a station of the Church of England Zanāna Missionary Society. In the latter town a fine church for the native congregation, a high school, an orphanage, and a leper asylum are superintended by the missionaries. In 1901 the number of native Christians was 514.

General
agricul-
tural con-
ditions.

The soils on the two sides of the Ganges are very different. On the north the soil, like that of Lower Bengal, consists chiefly of good clays intermixed with sand, which are ordinarily very friable. On the south of the river five different kinds are found. Along the south-eastern boundary is a high belt of land some 6 to 10 miles wide, containing gravel, granite, jasper, and basalt; this is the least productive soil, but grows *rahar* and is well wooded. Of less elevation, but still above flood-level, is *bāri* land, which yields rich cold-season crops, such as wheat, barley, oats, mustard, and sugar-cane, and is classed as either *sāi* or *dosāl* according as it gives one or two crops in the year. Land fit for growing rice is known as *kheyāri* land, which is also divided into the same two classes according to the number of crops it produces; some of this land, however, loses much of its value from the presence of calcareous nodules or from efflorescence of soda. *Chaur* is very low marsh land, which cannot be cultivated till after the rainy season is passed.

Diāra is land lying on the bank of the Ganges which is subject to yearly inundation ; it produces good cold-season crops and is very suitable for the cultivation of indigo. When covered with a layer of sand, it is called *bālūbandh*, and if the sand is not more than 18 inches deep, the long tap-root of the indigo plant reaches to the good soil below and the plant flourishes.

In 1903-4 the cultivated area was estimated at 3,320 square miles and the cultivable waste at 312 square miles, details by subdivisions not being available. About 35 per cent. of the cultivated area is twice cropped.

Chief agricultural statistics and principal crops.

Rice is the staple food-grain. The principal crop is the *aghani* or winter rice, which is sown in May and reaped in December or January, and covers 1,707 square miles ; while the *bhadoi* or early crop, which is also sown in May but reaped in August, covers 495 square miles. Other staple crops are maize (391 square miles) and *maruā* (192), while important food-grains are wheat (353), barley, *jowār*, and gram. Oil-seeds include linseed, rapeseed, mustard, castor-oil, and *ul*, cotton and jute are the chief fibres, but a new fibre, rhea, is now being grown at Bangaon and may possibly become important. Sugar-cane (100 square miles) is more extensively grown than in any other District of Bengal ; on the other hand indigo with 12,000 acres, though still an important crop, has been affected by the fall in prices in recent years.

Improvements have been effected in the cultivation of sugar-cane, and the Nainī Tāl potato has also been introduced with success. Loans under the Agriculturists' Loans Act have been granted freely in times of distress ; Rs. 36,000 was advanced in 1892-3 on account of the failure of the crops, Rs. 30,000 in 1897-8, another year of scarcity, and Rs. 16,000 in 1899-1900 in consequence of disastrous floods.

Improvements in agricultural practice.

As elsewhere in Bihār, the cattle are of a better and stronger breed than those of Bengal proper. There is no lack of pasturage ; the *ghoghrās* of Kātūria in the south and the *chaur* lands of the Dharampur *pargana* in the north provide abundance of grazing land, and scarcity of fodder is seldom experienced even in periods of drought or famine. The only cattle fair of importance is held at Singheswar in Madhipurā.

Cattle.

There are no canals ; irrigation is carried on principally by means of reservoirs and the system of *āhars* and *pains* which is common throughout Bihār. A reservoir is made on the side of a hill near a river as high up as is feasible ; and when the river comes down in flood, water is diverted into the reservoir and is subsequently carried where required

Irrigation.

over a series of terraces. This scheme of irrigation removes the need for canals, and produces excellent crops upon most unpromising land. It fails only when the opportunity of filling the reservoirs is missed and the last flood of the river comes down without advantage being taken of it. The area of land irrigated by means of tanks and wells is estimated at 1,121 square miles.

Minerals. Lead ores (principally argentiferous galena) occur at Gaurīpur or Phāgā, Dahijār, Khāndā, Gamharia, Khajuriā, and Karikhar. At Phāgā 103 oz. 2 dwt. 12 grs. of silver and at Khajuriā 46 oz. 4 dwt. 3 grs. have been obtained per ton of lead from galena; but two attempts made to work galena in 1878-9 and in 1900 were soon abandoned. Other minerals existing in the District are sulphide of lead, sulphuret of antimony, malachite, talc, chlorite, and jasper. Iron ore is also distributed over the whole of the hilly country, but is not much worked. Close to Colgong there are several small hills consisting of piled masses of a very compact grey granite, which appears at one time to have been quarried for the construction of temples

Arts and manufactures. The principal manufactures are *tasar* silk and *bafta* cloths, indigo, *g/hī*, iron and brass utensils, cloth, and lac bracelets. *Gur* (molasses) is made at Bānka and exported to Lower Bengal; coarse coloured glass used for bracelets is manufactured at Bhāgalpur town; and carpets and blankets are made in the Central jail. The manufacture of *tasar* is carried on by means of hand-loom of a primitive kind. The silk is woven with a mixture of cotton in various proportions, and the pieces of cloth produced are called by different names according to the proportion of cotton in warp or woof. The indigo industry is declining owing to the competition of the artificial dye, and in 1903-4 the out-turn was only 75 tons. In Bhāgalpur town there are a few small factories of aerated water.

Commerce. The chief imports are coal and coke, salt, cotton piece-goods, gunny-bags, gram and pulses, silk (raw), and tobacco (raw); the chief exports are rice and paddy, wheat, gram and pulses, linseed, mustard seed, and indigo. The imports are received by rail or steamer from Eastern Bengal or come down by road from Nepāl. In order to gauge the extent of trade with Nepāl, three registration posts have been established on three main routes from the north; but a part of the trade comes by intermediate routes and so escapes observation. The export trade, like the import trade, is largely with Nepāl and Eastern Bengal. The important trade centres are: in

the south, Sultānganj, Bhāgalpur, Colgong, Pīrpainti, Belhar, Amarpur, Barahāt, Jaypur, and Bānka; and in the north, Madhipurā, Kishanganj, Bangaon, Pratāpganj, Bihpur, and Supaul. In the south most of the trade is carried by the East Indian Railway loop-line and by the Steam Navigation Company, whose boats facilitate the carriage of grain from the Gangetic tracts. New trade facilities have been afforded by the opening of the railway connecting Sonpur with Katihār and the branch line from Bihpur to Barārī, which have diverted a large amount of the trade of North Bhāgalpur, but have hardly affected traffic in the south.

Three main railway lines run east and west almost parallel through the District. The loop-line of the East Indian Railway (broad gauge) passes along the south bank of the Ganges, with a branch line from Sultānganj station to Sultānganj Ghāt for goods only. On the north bank runs the Hājipur-Katihār extension of the Bengal and North-Western Railway (metre gauge). In connexion with it is a branch line from Bihpur to Barārī Ghāt, from which a steam ferry plies across the Ganges to Bhāgalpur; it is proposed to construct a line from the south bank of the river to Bhāgalpur railway station. The Tirhut State Railway (metre gauge), worked as part of the Bengal and North-Western Railway system, passes through the north of the District, terminating on the east at Khanwā Ghāt on the Kosi, where it is connected by a ferry with the line from Anchrā Ghāt to Katihār. A new line running from Mansi in Monghyr north to Bhaptiāhī to connect the Hājipur-Katihār Railway with the Tirhut State Railway is under construction, and from this line a branch will run to Madhipurā. A proposal has also been made to construct a branch from Bhāgalpur via Bausi to Deogarh in the Santāl Parganas.

Including $39\frac{1}{2}$ miles of village tracks, the District contains 1,763 miles of road, of which $63\frac{1}{2}$ are metalled. The principal metalled road leads from Bhāgalpur town to the Santāl Parganas via Jagdispur and Bausi. Other important roads run west to Monghyr, east to Sāhibganj, and north to Madhipurā and Supaul.

The principal waterway is the Ganges, on which traffic is carried on by the Steam Navigation Company. Most of the rivers in the north of the District are navigable for part of the year. The Tiljūgā is navigable by boats of 70 tons as far as Tilakeswar, and the lower reaches of the Dimrā and Talabā are navigable by boats of 9 tons. The Kosi is very dangerous for navigation, owing to the frequent changes in its course and

Water
communi-
cations

its strong current during the rains. In addition to the ferries across the Kosi at Khanwā Ghāt and across the Ganges at Bhāgalpur, there are important ferries at Colgong and Sultān-ganj.

Famine

Bhāgalpur has suffered from time to time from scarcity, and there are records of famines in 1770, 1775, 1779, and 1783. From that date there seems to have been no year of great distress till 1866, the year of the Orissa famine, when Bhāgalpur suffered considerably, the price of rice in July, 1866, rising to $8\frac{1}{4}$ seers for a rupee. In the famine of 1874 elaborate measures were taken to relieve distress. The total expenditure exceeded 9 lakhs, but a part of this consisted of advances to cultivators which were afterwards partially realized. In the famine of 1896-7 a portion of the District, 300 square miles in area, was affected and required a limited amount of relief. Test works were opened early in 1897, but they failed to show any great demand for labour, the number of persons in receipt of relief never exceeding 25,000.

District subdivisions and staff.

For administrative purposes the District is divided into four subdivisions, with head-quarters at BHĀGALPUR, BĀNKA, MADHIPURĀ, and SUPAUL. The District Magistrate-Collector is assisted at head-quarters by a staff consisting of five Deputy-Magistrate-Collectors and two Sub-Deputy-Collectors, and also occasionally by a Joint or Assistant Magistrate. The outlying subdivisions are in charge of Deputy-Magistrate-Collectors, the subdivisional officers of Supaul and Madhipurā being usually assisted by a Sub-Deputy-Collector.

Civil and criminal justice.

The civil courts subordinate to the District and Sessions Judge, who is also Judge of Monghyr, are those of three Sub-Judges at head-quarters and of five Munsifs, of whom two are stationed at Bhāgalpur and one each at Bānka and Madhipurā, while the fifth is an additional Munsif for Madhipurā and Begusarai in Monghyr. The criminal courts include those of the Sessions Judge, an Assistant Sessions Judge, the District Magistrate, and the above-mentioned magistrates. The commonest cases are those arising out of disputes about land; in recent years there has been an outbreak of dacoity in the north of the District.

Land revenue.

As already stated, Bhāgalpur formed under Muhammadan rule part of the *sarkār* of Monghyr, and the amount of land revenue for which it was liable cannot be separately determined; it is, however, known that the *samindārs* in the hilly parts of the Bānka subdivision enjoyed semi-independence and seldom paid any revenue at all. In consequence of the embezzlements

which followed the Permanent Settlement, the land revenue in 1799 amounted to only 3.10 lakhs ; and owing to the backward condition of the District at the time of the settlement and to the imperfect assessments originally made, the incidence of land revenue is extraordinarily low, amounting for the whole District to R. 0-4-6 per cultivated acre and to less than 11 per cent. of the rental. In many places, especially in the Bānka subdivision, there has been a great development of estates in recent years, and villages with a rental of more than Rs. 1,000 are paying a nominal revenue of Rs. 8 a year. In the north the westward advance of the Kosi river has washed away a number of estates, and the proprietors have allowed them to be sold for arrears of revenue. In this way the number of *khās mahāls* is increasing. In all, however, only 70 estates with a current demand of Rs. 38,000 are held direct by Government, the remainder of the District, with the exception of 10 temporarily settled estates paying Rs. 2,000, being permanently settled. During the last century the subdivision of estates has been remarkable, the number of estates having increased thirty-fold and the number of proprietors eighty-fold in that time. In the south the rent of low land suitable for rice cultivation varies from 12 annas to Rs. 6 per acre and of *bhith* or high land from Rs. 3 to Rs. 9 per acre, while high jungle lands fetch only from 6 annas to Rs. 1-8. In the north, rice land varies from 12 annas to Rs. 4-1, and *bhith* land from 12 annas to Rs. 3-8 per acre. The average area of a ryot's holding in the south is from 8 to 15 acres, but in the north it is less. A ryot with a holding of 20 acres is considered to be well-to-do, and holdings of more than 40 acres are almost confined to the *mahājan* class, who lend money and grain at interest.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	5,71	6,02	5,97	5,96
Total revenue . .	14,15	15,07	17,46	17,28

Outside the municipalities of BHĀGALPUR and COLGONG, Local and local affairs are managed by the District board, to which sub-^{municipal} divisional local boards are subordinate. In 1903-4 its income ^{govern-}ment. was Rs. 2,31,000, including Rs. 1,38,000 from rates ; and the

expenditure was Rs 2,30,000, the chief item being Rs. 1,57,000 spent on public works.

Public
works.

The only important work constructed by the Public Works department is the Chāndan embankment. This extends for $3\frac{1}{2}$ miles along the left bank of the Chāndan river, and protects an area of about $4\frac{1}{2}$ square miles, including the village of Bānka and some low-lying land in the vicinity. Other smaller embankments have been constructed by *zamindārs*.

Police and
jails.

The District contains 21 *thānas* or police stations and 10 outposts. The force subordinate to the District Superintendent in 1903 consisted of 4 inspectors, 33 sub-inspectors, 38 head-constables, and 399 constables. There was also a rural police force of 194 *daffadārs* and 3,782 *chaukidārs*. A company of military police is stationed at Bhāgalpur town. The training school for officers of the Bengal police service is at Bhāgalpur, and during the year 170 cadets and 9 probationary Assistant Superintendents were trained there. A Central jail at Bhāgalpur has accommodation for 1,964 prisoners, and subsidiary jails at Bānka, Madhipura, and Supaul for 45

Education.

Education is backward, only 3·3 per cent. of the population (6·6 males and 0·1 females) being able to read and write in 1901. An advance has, however, been made in recent years; for though the number of pupils under instruction fell from 21,286 in 1880-1 to 17,306 in 1892-3, it increased again to 25,387 in 1900-1. In 1903-4, 27,996 boys and 2,492 girls were at school, being respectively 18·1 and 1·5 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,319: namely, one Arts college, 19 secondary, 962 primary, and 337 special schools. The expenditure on education was Rs. 1,60,000, of which Rs. 15,000 was met from Provincial funds, Rs. 35,000 from District funds, Rs 2,000 from municipal funds, and Rs. 74,000 from fees. The chief educational institution is the Tejnarāyan Jubilee College in Bhāgalpur town; the only other notable school is the Sanskrit *tal* at Karangarh. A Santāl boys' school and a Santāl girls' school near the eastern border have a large attendance, while all the primary schools in the south of the District are attended by boys of aboriginal races.

Medical

In 1903 the District contained 13 dispensaries, of which 6 had accommodation for 70 in-patients. At these the cases of 71,000 out-patients and 954 in-patients were treated during the year, and 4,206 operations were performed. The expenditure was Rs. 24,000, of which Rs. 1,800 was met from Government contributions, Rs. 8,000 from Local and

Rs. 4,000 from municipal funds, and Rs. 8,000 from subscriptions.

Vaccination is compulsory only in municipal areas. In Vaccination. 1903-4 the number of persons successfully vaccinated was 72,000, representing 35·8 per 1,000 of the population.

[M. Martin (Buchanan-Hamilton), *Eastern India*, vol. ii (1838); Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xiv (1877).]

Bhāgalpur Subdivision.—Head-quarters subdivision of Bhāgalpur District, Bengal, lying between 25° 4' and 25° 30' N. and 86° 39' and 87° 31' E., with an area of 934 square miles. The subdivision consists of an alluvial tract of great natural fertility, bounded on the north by the Ghugri and intersected by the Ganges. The population in 1901 was 585,244, compared with 552,279 in 1891, the density being 627 persons per square mile. It contains two towns, BHĀGALPUR (population, 75,760), the head-quarters, and COLGONG (5,738); and 830 villages. Bhāgalpur, SULTĀNGANJ, and Colgong are important marts on the banks of the Ganges. There are archaeological remains of interest at these places, as well as at JAHĀNGĪRA, KARANGARH, and PATHARGHĀTA.

Bānka Subdivision.—Southern subdivision of Bhāgalpur District, Bengal, lying between 24° 33' and 25° 7' N. and 86° 19' and 87° 11' E., with an area of 1,182 square miles. It is situated on the fringe of the Santāl Parganas, and the country rises from the dead level of the northern alluvial plain by a series of rolling ridges, valleys, and jungle-clad hills. The population in 1901 was 433,499, compared with 423,350 in 1891. It contains 994 villages, one of which, BĀNKA, is the head-quarters; but no town. The subdivision is less densely populated than the remainder of the District, supporting only 367 persons per square mile. MANDĀRGIRI hill possesses some archaeological interest, and there are also remains at BAUSI in its neighbourhood.

Madhipurā Subdivision.—Northern subdivision of Bhāgalpur District, Bengal, lying between 25° 24' and 26° 7' N. and 86° 19' and 87° 8' E., with an area of 1,176 square miles. The subdivision, which is bounded on the south by the Ghugri, is a low-lying alluvial tract, intersected by numerous rivers and water-channels and liable to inundation from their overflow. The population in 1901 was 559,310, compared with 575,505 in 1891, the density being 476 persons per square mile. It contains 757 villages, one of which, MADHIPURĀ, is the head-quarters, but no town. The decline in population is accounted

for by the fact that a large part of the Madhipurā and Kishanganj *thānas* have been devastated by the lavages of the Kosi, which has deposited a thick sediment of silt.

Supaul Subdivision.—Northern subdivision of Bhāgalpur District, Bengal, lying between $25^{\circ} 59'$ and $26^{\circ} 34'$ N. and $86^{\circ} 24'$ and $87^{\circ} 8'$ E., with an area of 934 square miles. The subdivision is a continuation of the great alluvial plain of North Bihār, its northern frontier consisting of the marshy submontane tract known as the *tarai*. The population in 1901 was 510,900, compared with 481,562 in 1891. It contains 482 villages, of which SUPAUL is the head-quarters; but no town. The subdivision is the most progressive part of the District and, after the head-quarters subdivision, the most thickly populated, the density being 547 persons per square mile.

Banka Village.—Head-quarters of the subdivision of the same name in Bhāgalpur District, Bengal, situated in $24^{\circ} 53'$ N. and $86^{\circ} 56'$ E., on the Chāndan river. Population (1901), 1,091. It contains the usual public offices; the sub-jail has accommodation for 12 prisoners. *Gur* is made and exported to Lower Bengal.

Bausi.—Village in the Bānka subdivision of Bhāgalpur District, Bengal, situated in $24^{\circ} 48'$ N. and $87^{\circ} 2'$ E., near the base of MANDĀRGIRI. Population (1901), 649. The numerous buildings, tanks, large wells, and stone figures found for a mile or two round the base of the hill show that a great city must once have stood here. The people of the neighbourhood say that it contained 52 markets, 53 streets, and 88 tanks. According to local tradition, a large building, the ruins of which still exist, and the walls of which contain an immense number of small holes, evidently intended to hold *chirūgs*, or small native lamps, was formerly illuminated on the night of the Dewālī festival by a hundred thousand of these lights, each householder being allowed to supply only one. How or when the city fell into ruin is not known, though popular tradition ascribes its destruction to Kāla Pāhār. A Sanskrit inscription on a stone triumphal arch seems to show that the city was in existence less than 300 years ago. After the destruction of the temple of Madhusūdan on Mandārgiri hill, the image of the god was brought to Bausi, where it now remains. Once a year, on the Paus Sankrānti day, the image is carried from Bausi to the foot of the hill, and is swung on the triumphal arch. About 50,000 pilgrims assemble from all parts of the country, in order to bathe in the sacred tank at the foot of the hill, and a fair is held which lasts for fifteen days.

Bhāgalpur Town.—Head-quarters of the Division and District of the same name in Bengal, situated in $25^{\circ} 15' N.$ and $87^{\circ} 0' E.$, on the right bank of the Ganges and on the East Indian Railway, distant from Calcutta 265 miles by rail and 326 by river. Bhāgalpur figures more than once in Muhammadan chronicles of the sixteenth century. Akbar's troops marched through the town when invading Bengal in 1573 and 1575. In Akbar's second war against the Afghān king of Bengal, his Hindu general Mān Singh made Bhāgalpur the rendezvous of all the Bihār contingents, which in 1592 were sent thence through Chotā Nāgpur to Burdwān, where they met the Bengal levies, and the united army invaded Orissa. The town was subsequently made the seat of an imperial *faujdar* or military governor. The town contains two monuments to the memory of Augustus Cleveland, Collector of Bhāgalpur towards the end of the eighteenth century, one of brick, erected by the landholders of the District, the other of stone sent out by the Directors of the East India Company from England. Within the town and its neighbourhood (at Champanagar) are some interesting Muhammadan shrines, and two remarkable places of worship, belonging to the Jain sect of Oswāls, one of them erected by the great banker of the eighteenth century, Jagat Seth. The KARANGARH plateau near the town formerly contained the lines of the Bhāgalpur Hill Rangers organized by Cleveland in 1780.

The population increased from 65,377 in 1872 to 68,238 in 1881, 69,106 in 1891, and 75,760 in 1901, of whom 70 per cent. were Hindus and 29 per cent. Muhammadans, while there were 333 Christians and 118 Jains. The town is thriving, its growth being due mainly to a great development in the export trade in agricultural produce, which has led to the opening of a second railway station. It contains the usual criminal, revenue, and civil courts, a police training school, Central jail, Arts college, dispensary with 32 beds, and a Lady Dufferin hospital. The jail has accommodation for 1,964 prisoners, who are employed in the manufacture of blankets and carpets, canework, furniture-making, carving, oil-pressing, grain-grinding, and rope-making. Cerebro-spinal fever has been practically endemic in the jail since 1897, outbursts occurring at varying intervals; the disease appears to be commonest among prisoners employed on dusty forms of labour, in the garden and on road-making. The Jubilee College, built by Bābu Tejnārāyan Singh, a *samindār* of the town, in 1887, was raised to the first grade in 1890, when law classes were opened. The college

has a fine building and a strong staff of professors; a hostel for boarders is attached to it.

Bhāgalpur was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged 1.36 lakhs, and the expenditure 1.15 lakhs. In 1903-4 the income was 1.29 lakhs, including Rs. 32,000 derived from a tax on houses and lands, Rs. 21,000 from a water rate, Rs. 11,000 from tolls, Rs. 12,000 from a conservancy rate, and Rs. 10,000 from a tax on vehicles. The incidence of taxation was Rs. 1-2-4 per head of the population. In the same year the expenditure was 1.12 lakhs, the chief items being Rs. 3,000 spent on drainage, Rs. 20,000 on conservancy, Rs. 9,000 on medical relief, Rs. 17,000 on roads, and Rs. 1,900 on education. The town is a very healthy one, with a natural system of drainage and a filtered water-supply, which was extended in 1896-7 to the suburbs of Nāthnagar and Champanagar, a loan of 3 lakhs having been advanced by Government for the purpose.

Colgong (*Kahalgao*).—Town in the head-quarters subdivision of Bhāgalpur District, Bengal, situated in 25° 16' N. and 87° 14' E., on the right bank of the Ganges and on the East Indian Railway, 245 miles from Calcutta. Population (1901), 5,738. Ghiyās-ud-dīn Mahmūd, the last independent king of Bengal, died here in 1539 after the sack of Gaur. There is a rock temple of peculiar style, which formerly contained several fine specimens of sculpture, and the place appears to have been visited by the Chinese pilgrim Hiuen Tsiang. It is of some commercial importance and was once notorious as the resort of *thags*. Colgong was constituted a municipality in 1869. The income and expenditure during the decade ending 1901-2 averaged Rs. 5,000. In 1903-4 the income was Rs. 5,500, mainly from a tax on houses and lands; and the expenditure was Rs. 6,000. A scheme for the drainage of the town is under consideration.

[*Archaeological Survey Reports*, vol. xv, pp. 34-6.]

Jahāngīra.—Island in the Ganges, situated in the head-quarters subdivision of Bhāgalpur District, Bengal, in 25° 15' N. and 86° 44' E. It contains a temple, a *lingam*, and several interesting rock sculptures.

[*Archaeological Survey Reports*, vol. xv, pp. 20-4.]

Karangarh.—Hill, or more properly plateau, in the head-quarters subdivision of Bhāgalpur District, Bengal, situated in 25° 15' N. and 86° 56' E., near Bhāgalpur town, and said to derive its name from Karna, a pious Hindu king. The plateau, which is locally known as the *Āila* or fort, is believed

to be the site of one of the famous pre-Buddhist forts in Bengal; the lines of several bastions and the ditch in the west can still be traced. In more modern times it contained the lines of the Hill Rangers, a body of troops raised in 1780 from among the hill people by Augustus Cleveland, Collector of the District, for the pacification of the lawless jungle tribes. The corps was disbanded in 1863 on the reorganization of the Native army. The only objects of interest are Saiva temples of some celebrity. These consist of four buildings (*maths*), with square bases and the usual pointed pinnacles. One is several hundred years old, the others being modern. Numbers of Hindus, though not usually worshippers of Siva, pay their devotions here on the last day of the month of Kārtik. The temples contain several of the so-called seats of Mahādeo or Siva, one of which is made of stone from the Narbadā. There are also two monuments erected to the memory of Cleveland—one by Government, and the other by the landholders of the District. The Bidyāsāgar Memorial Sanskrit *tol* occupies a fine building in the fort compound.

Madhipurā Village.—Head-quarters of the subdivision of the same name in Bhāgalpur District, Bengal, situated in 25° 56' N. and 86° 48' E., on the right bank of the Parwān river, about 52 miles from Bhāgalpur town. Population (1901), 5,188. The neighbourhood is associated with the popular ballad of Lorik, the deified cowherd. The village contains the usual public offices; the sub-jail has accommodation for 15 prisoners.

Mandārgiri.—Hill about 700 feet high, in the Bānka subdivision of Bhāgalpur District, Bengal, situated in 24° 50' N. and 87° 2' E., about 40 miles south of the town of Bhāgalpur. The hill, which consists of a huge mass of granite overgrown near the summit with low jungle, is a sacred spot to the Hindus, who consider it the mythological mountain Mandār, which was used in churning the ocean. The oldest buildings are two ruined temples near the top of the hill, which are ascribed by local tradition to a legendary Chola king who was cured of his leprosy by bathing in a tank here. There are two inscriptions and some rude carvings on the rock, and numerous artificial tanks have been cut in the side of the hill, some of which go back to the time of Aditya Sen (A. D. 675). The largest of these, known as the Sitākund, is 100 feet long by 500 feet wide and stands 500 feet above the surrounding plain.

[M. Martin, *Eastern India*, vol. ii, pp. 60-3.]

Patharghāta.—Hill in the head-quarters subdivision of Bhāgalpur District, Bengal, lying between $25^{\circ} 17'$ and $25^{\circ} 22'$ N. and $87^{\circ} 12'$ and $87^{\circ} 16'$ E., on the bank of the Ganges. On the northern side of the hill are some rock sculptures, apparently of a date prior to the seventh or eighth century A. D., the most interesting of which is a long row of figures known locally as the *Chaurāsi sunni* ('84 sages'). The hill also contains five caves, in the most important of which, the Bateswar cave, bronze and silver relics have been discovered.

[M. Martin, *Eastern India*, vol. ii, pp. 64-5; *Archaeological Survey Reports*, vol. xv, pp. 36-7.]

Pirpanti.—Village in the head-quarters subdivision of Bhāgalpur District, Bengal, situated in $25^{\circ} 18'$ N. and $87^{\circ} 25'$ E., on the East Indian Railway. Population (1901), 2,741. There is a considerable export of country produce. Stone is quarried in the neighbourhood.

Sultāganj.—Village in the head-quarters subdivision of Bhāgalpur District, Bengal, situated in $25^{\circ} 15'$ N. and $86^{\circ} 45'$ E., close to the Ganges and near the East Indian Railway. Population (1901), 4,410. Sultāganj is conspicuous for two great rocks of granite, one of which on the river bank is crowned by a Musalmān mosque. The second and larger one is occupied by a temple of Ghaibnāth Siva, and is a place of great holiness in the eyes of Hindus, few persons of position passing the place without making offerings to the idol. The river here impinges on a stone cliff, which is believed to be the scene of the loves of the river nymph and the god Siva. Close to the railway station are an ancient *stūpa* and extensive remains of a Buddhist monastery, where a number of figures have been exhumed. The town, which is served by rail and river, is a flourishing mart.

[*Archaeological Survey Reports*, vol. xv, pp. 24-31.]

Supaul Village.—Head-quarters of the subdivision of the same name in Bhāgalpur District, Bengal, situated in $26^{\circ} 6'$ N. and $86^{\circ} 36'$ E. Population (1901), 3,101. The village, which is an important mart, contains the usual public offices; the sub-jail has accommodation for 18 prisoners.

Purnea District.—District in the Bhāgalpur Division of Bengal, lying between $25^{\circ} 15'$ and $26^{\circ} 35'$ N. and $87^{\circ} 0'$ and $88^{\circ} 32'$ E., with an area of 4,994 square miles. It is bounded on the north by the State of Nepā and Darjeeling District; on the east by Jalpaiguri, Dinājpur, and Mālda; on the west by the District of Bhāgalpur; and on the south by the Ganges, which separates it from the Santāl Parganas and

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from South Bhāgalpur. The District lies therefore at the eastern extremity of the submontane tract known as North Bihār, which is wedged in between the Ganges and Nepāl. Purnea originally belonged to Bengal, the river Kosi forming the eastern boundary of the sub-province of Bihār; but, in common with the rest of the Bhāgalpur Division, the District now forms part of Bihār.

Lying towards the eastern limit of the Gangetic plain, Purnea presents an almost dead level, with the exception of a few tracts of undulating country in the north, bordering on Nepāl, and a small hill of nodular limestone (*kankar*) near Manihāri in the south, an outlying spur of the Chotā Nāgpur plateau. The east of the District is intersected by rivers and natural drainage channels, which give access to all parts of this tract during the rainy season; and the rice swamps are never completely dry. The west, on the other hand, is a sandy grass country seamed by old channels of the Kosi river, which is constantly changing its bed and is now steadily trending westwards. Wherever it goes, the Kosi covers its banks with a thick deposit of sand during its annual inundations; and the consequence is that this part of the District is comparatively little cultivated, though it affords pasturage for vast herds of cattle.

The rivers are all tributary to the GANGES, the largest being the KOSI, the MAHĀNANDĀ, and the Panār. The Panār is formed by the confluence of several hill streams from Nepāl, and roughly marks the boundary line between the arable land in the east and the pasture land in the west. It receives several tributaries on its left bank, and sends off the Monain and Bhishnā from its right bank, eventually joining the Ganges in the south-east corner of the District. Of the other rivers, the most important are the Saurā, which, rising in the north-west of the District, flows past Purnea town and joins the Ganges near Manihārī; and the Kankai, the principal tributary of the Mahānandā.

The District is covered by alluvial deposits, consisting in the Geology. east of a rich loam, while in the west the country is deeply overlaid with sand deposited by the Kosi.

In the east, where the ground is not occupied by the usual Botany. crops of North Bengal, it is covered with an abundant natural vegetation. Old river-beds, ponds, and marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses; and in

some parts, where the ground is more or less marshy, *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and the largest is *Barringtonia acutangula*. Though the District contains no forests, this part of it is well timbered, but the sandy western prairies are nearly treeless. Mango groves are a common feature, and several species of *Ficus* are also numerous. The villages are generally embedded in thickets or shrubberies of semi-spontaneous and more or less useful trees.

Fauna. Wild hog and hog deer abound; there are also a few leopards and wild buffaloes, and tigers are occasionally met with.

Temperature and rainfall. There are no extremes of temperature; the mean is 62° in January, rising to 75° in March and reaching 84°, its highest point, in May. The lowest mean minimum is 48° in January, and the highest mean maximum 95° in April. Rainfall commences early and is heavy, the annual fall being 71 inches, of which 13.1 inches fall in June, 17.7 in July, 15.8 in August, and 12.9 in September.

Destructive floods, due to the overflow of the Ganges, Kosi, and Mahānandā, occur almost annually in the south and east of the District. The earthquake of 1897 was severely felt and caused great damage to masonry houses.

History and archaeology. The Mahānandā river traditionally marks the farthest eastern limit of the extension of Aryan influence, and the early history of this District is confused by the struggles which ensued between the western invaders and the aboriginal inhabitants. It is probable that the north of the District was overrun by the Nepālese and other hillmen, until it was finally conquered by Saif Khān in the eighteenth century. According to the Mahābhārata, the Mahānandā formed the boundary between the kingdom of Anga on the west and Pundra or Paundravardhana, the country of the Pods, whose capital was at Mahāsthān in Bogra District. During the ninth century the Pāl dynasty rose to power in the country formerly known as Pundra and Anga, and the monolith near Darāra factory, in the west of the District, probably dates from this period. In the beginning of the thirteenth century the south of the District is said to have constituted part of the kingdom of Lakshman Sen, whose capital was at Nadiā, and to have been conquered by Muhammad-i-Bakhtyār Khiljī. In the early days of Mughal rule Purnea was an outlying military province of the Mughal empire, and its revenues were almost consumed in protecting its borders against the incursions of the wild

tribes from the north and east. Early in the eighteenth century a *faujdar* was appointed with the title of Nawāb, who united with the command of the frontier army the fiscal duties of *āmil* or superintendent of the revenues. At this time the northern boundary was at Jalālgarh, a frontier fort only a few miles north of Purnea town. In 1722 the post of *faujdar* was held by Saif Khān, the greatest of the governors of Purnea, who extended the frontier on all sides, driving the Nepālese 30 miles northward to the present boundary and taking possession of the Dharampur *pargana*, which then lay west of the Kosi and was included in the *sarkār* of Monghyr. One of his successors, Shaukat Jang, declared war against Sirāj-ud-daula, the Nawāb of Bengal; and the latter, flushed with his recent capture of Calcutta, marched in 1757 to Purnea and gained a great victory at Nawābganj.

The District came into the possession of the British in 1765, along with the rest of Bengal; but it remained in a state of anarchy until 1770, when an English official was appointed with the title of Superintendent. Its present area has been arrived at gradually after the transfer of large portions to create the District of Mālda, and more recently to consolidate Bhāgalpur upon the western frontier. During the Mutiny two parties of mutineers entered Purnea, but were forced out into Nepāl by the energetic action of the Commissioner, Mr. George Yule, before they could do any mischief. There are ruins of old forts at Benugarh, Asurgarh, Darāra, Sikligarh, Jalālgarh and elsewhere.

The population of the present area increased from 1,714,995 in 1872 to 1,849,073 in 1881 and 1,944,658 in 1891, but fell to 1,874,794 in 1901. The decrease of 3·6 per cent. during the last decade is attributable to the general unhealthiness of the District, and especially to the two great cholera epidemics of 1891 and 1900, the latter of which accounted for over 46,000 deaths, or 24 per 1,000 of the population; while the total recorded death-rate in the same year reached the appalling figure of 56 per 1,000. During the years 1892-1900 the reported deaths exceeded the births by more than 38,000. Fever is the chief cause of the mortality; a peculiar form known as *kālādukhā*, whose characteristic symptom is pigmentation of the skin, is apparently of malarial origin and is extremely malevolent. Goitre and deaf-mutism are prevalent along the course of the Kamlā river.

The following table gives particulars of population for each subdivision in 1901:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages.				
Purnea . .	2,571	2	1,528	838,333	326	— 2.6	25,210
Arāriā . .	1,077	...	600	416,985	387	— 3.6	13,893
Kishanganj .	1,346	1	1,227	619,476	460	— 4.8	16,488
District total	4,994	3	3,355	1,874,794	375	— 3.6	55,591

The three towns are PURNEA, the head-quarters, KISHANGANJ, and the important railway junction of KATIHĀR. The density is less than in any other Bihār District. The only *thāna* which showed an increase during the decade ending 1901 was Saifganj, which owes its development of 28.6 per cent. to the growing importance of Katihār. With this exception, the decline is greatest in the *thānas* in the east, especially in Balarāmpur, which is studded with marshes unfit for cultivation and is already the most sparsely populated *thāna* in the District. Numerous graziers from the Bihār Districts, particularly from Bhāgalpur, feed their cattle during the cold-season months on the splendid pasture-lands to be found on the left bank of the Kosi river. The Mahānandā river forms a linguistic boundary between Hindī on the west and Bengali on the east; and the census figures, which return 94.6 per cent. of the population as Hindī-speaking and only 5 per cent. as Bengali-speaking, are not reliable. Dr. Grierson estimates that a third of the inhabitants speak Bengali, and this is probably correct. The Mahānandā is also a religious boundary, as Musalmāns number two-thirds of the inhabitants east of this river, but west of it less than one-third. Of the total population, Hindus (1,080,091) constitute 57.6 per cent. and Muhammadans (793,672) 42.3 per cent. In 1901 the total number of Christians was 439, of whom 134 were natives.

Castes and occupations.

The majority of the Muhammadans are returned as Shaikhs (671,000); and these, together with the Jolāhā and Dhuniā functional castes, are doubtless the descendants of converts from the aboriginal Rājbanis or Koch (103,000) of North Bengal, who are still very numerous east of the Mahānandā. Ahīrs and Goālās number 125,000, and most of the other great Bengal and Bihār castes are largely represented. The Kishanganj subdivision is the home of the Gangai or Ganesh (42,000), who are especially numerous along the course of the Kankai river. Of the total population, 71 per cent. are supported by

agriculture, 12 per cent. by industries, 0.5 per cent. by commerce, and 0.6 per cent. by the professions.

Owing to the extensive pasturage, the proportion of arable land is far below the average of the neighbouring Districts.

The agricultural statistics for 1903-4 are shown below, in square miles :—

Subdivision.	Total.	Cultivated.	Cultivable waste
Purnea	2,571	1,568	531
Arāriā	1,077	421	171
Kishanganj . . .	1,346	955	135
Total	4,994	2,944	837

Rice is the principal crop, and is grown on 1,910 square miles, or 65 per cent. of the net area cropped, winter rice covering 40 per cent. and autumn rice 25 per cent. Pulses and oilseeds, principally mustard, of which the District is one of the largest producers, are extensively grown, each crop covering 9 per cent. of the net cultivated area, while indigo and tobacco occupy 23,000 and 31,000 acres respectively. The cultivation of indigo, which is grown mainly in the south and west, is on the decline, but tobacco and jute are gaining ground. Jute covers 3 per cent. of the net cropped area, being grown principally in the north and east.

Cultivation is gradually increasing, and within the last thirty years a large amount of waste land has been brought under the plough. The cultivators are on the whole well-to-do, and Government loans are rarely needed; Rs. 9,000, however, was advanced in 1892-3 in consequence of a partial failure of the crops.

The local cattle are small and feeble; but good cart-bullocks are imported from Chāpra and Tirhut, the principal markets being the Khagrā, Shāhpāra, Islāmpur, and Madanpur fairs in this District, and the Alawakhāwa fair in Dinājpur. There are also large cattle markets at Ichāmatī, Phulbāriā (near Kasbā), Phulbāriā (near Bibiganj), and Gandharbdānga. In the vast grass prairies on the banks of the Kosi and Ganges fine buffaloes are bred in large numbers, the *arens* or long-horned variety, which is said to contain a strain of the wild buffalo, being more common in the south and the *dhangris* or short-horned in the north.

Rough coloured cloths, known as *pholis*, cart-wheels, mats, and gunny-bags are manufactured in the Kishanganj sub-division, the last being of superior quality and largely exported;

rough but durable blankets are woven by a colony of Gareris at Katihār. The art-ware known as *bidri* is manufactured, in the shape of *hukkā* stands, bottles, and plates, from an alloy of brass inlaid with silver ; but the industry is declining, being now confined to a few families in the neighbourhood of Purnea and Kasbā. Indigo is still the most important manufacture, and there are about twenty-five factories in the District ; but the area under cultivation has much contracted in recent years, and the out-turn in 1903-4 amounted to only 256 tons. Five jute-presses, two of which are worked by steam, give employment to about 200 operatives.

Commerce. The chief exports are rice and food-grains, jute, oilseeds (especially mustard seed), and tobacco ; and the chief imports are rice and paddy from Dinājpur, food-grains, sugar, salt, European piece-goods, kerosene oil, and gunny-bags from Calcutta, sugar and country-made cloths from the United Provinces (chiefly Mirzāpur, Azamgarh, and Ghāzipur), and coal. The chief centres of trade are FORBESGANJ, RĀNIGANJ, KASBĀ, PURNEA, KATIHĀR, BĀRSOI, KISHANGANJ, and Khar-khari, all except Rāniganj and Khar-khari being situated on the railway, which conveys the bulk of the traffic. The trans-frontier trade with Nepāl is carried by carts, coolies, and pack-animals, the principal imports from Nepāl being rice and paddy, jute, gunny-bags, mustard seed, and timber, and the chief exports salt, sugar, kerosene oil, cotton twist, and piece-goods.

Railways,
roads, &c. The Bihār section of the Eastern Bengal State Railway (metre gauge) traverses the District from Kachnā on the border of Dinājpur to Manihārī on the Ganges, connecting with the Bengal and North-Western Railway at Katihār. A branch line runs from Bārsoi to Kishanganj, and a second branch from Katihār via Purnea and Forbesganj to the Kosi at Anchrā Ghāt. The chief road is the Ganges-Dārjeeling road from the Ganges at Kārāgola to Titālya in Jalpaiguri, which is metalled throughout its length of 105 miles. This is a Provincial road but is maintained by the District board, which keeps up in all 2,234 miles of roads, of which 120 miles are metalled and 424 are village tracks. The most important of these are the road from Jānkinagar to Abādpur, passing through Purnea town, Kadbā, and Bārsoi, and that from Pathardewa to Manihārī through Forbesganj, Arārīā, Purnea, and Katihār. The steamers of the Ganges service of the India General Steam Navigation Company touch at Manihārī in the south of the District, and connect at Sakrigālī with the East Indian Railway.

The District is not especially liable to famine, but in the great Bengal famine of 1770 more than a third of the inhabitants are said to have perished. There was scarcity in 1874, when relief was afforded on a lavish scale.

For administrative purposes the District is divided into three subdivisions, with head-quarters at PURNEA, KISHANGANJ, and BASANTPUR. The District Magistrate-Collector is assisted by a staff of five Deputy-Magistrate-Collectors. The subdivisional officers at Basantpur and Kishanganj are usually Deputy-Magistrates, though the latter, who is assisted by a Sub-Deputy-Magistrate, is occasionally a Civilian.

The civil courts are those of five Munsifs, two stationed at Kishanganj, and the others at Purnea, Basantpur, and Katihār; and of a Sub-Judge subordinate to the District and Sessions Judge, who is *ex officio* a special judge under the Bengal Tenancy Act. For criminal work, apart from the Sessions court, there are normally five courts of magistrates at Purnea, two at Kishanganj, and one at Basantpur. Dacoity and burglary are prevalent crimes.

In 1760, shortly before the British took over the administration of the District, the land revenue demand was fixed at 21 lakhs, of which 1.64 lakhs was allotted for collection, garrison, and other charges. In 1764 the demand was reduced to 18 lakhs, and on the Company's occupation it dropped to 15 lakhs, and in 1793 to 12½ lakhs. With a few unimportant exceptions, the whole of the District is permanently settled. In 1903-4 the current demand was 11.79 lakhs, payable by 1,702 estates, the incidence being R. 0-8-9 per cultivated acre, or 27 per cent. of the rental. Settlement proceedings under the Tenancy Act are in progress in Sūrjyapur *pargana*, which is nearly coterminous with the Kishanganj subdivision, and are being extended to the whole District. Many of the proprietors are absentees; and they frequently experience great difficulty in recovering their rents, as the cultivators are independent and prone to combine against their landlords. This has led to a great extension of the farming system, especially in the east of the District, where five-year leases are common. A peculiar tenure, known as the *gāch*, is prevalent in the Kishanganj subdivision. This tenure was originally a grant of an undefined area of jungle land at a low rental, to encourage reclamation; but it tends to become hereditary. Rents vary widely in different parts of the District, the prevailing rates ranging between 7 annas and 14 annas per acre in the Kadabā *pargana* and between Rs. 2 and Rs. 6-4

in the Surjyapur *pargana* ; while for the best jute and tobacco lands as much as Rs. 30 per acre is sometimes paid.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1	1900-1.	1903-4.
Land revenue . .	11,70	12,60	11,69	11,77
Total revenue . .	17,89	20,30	20,93	22,16

Local and municipal government. Outside the municipalities of PURNEA and KISHANGANJ, local affairs are managed by a District board, to which local boards for the three subdivisions are subordinate. In 1903-4 its income was Rs. 2,22,000, of which Rs. 1,13,000 was derived from rates ; and the expenditure was Rs. 2,35,000, including Rs. 1,54,000 spent on public works.

Public works. An embankment constructed by the Gondwāra indigo concern protects the east bank of the Kosi, and a small Government embankment has been constructed at Belwa to restrain the Panār from encroaching westwards. The Kosi is spanned near Kursela by a railway bridge which is an excellent piece of engineering work, and there is a fine railway bridge over the Mahānandā near Bārsoi.

Police and jails. The District contains 15 police stations and 26 outposts. The force under the District Superintendent in 1903 consisted of 4 inspectors, 52 sub-inspectors, 40 head constables, and 485 constables. The rural police numbered 493 *daffadārs* and 4,801 *chaukidārs*. The District jail at Purnea town has accommodation for 246 prisoners, and sub-jails at Kishanganj and Basantpur for 40.

Education. Education is exceptionally backward, as only 3.0 per cent. of the population (5.7 males and 0.1 females) could read and write in 1901. The number of pupils under instruction increased from 15,483 in 1892-3 to 18,967 in 1901-2. In 1903-4, 23,098 boys and 3,551 girls were at school, being respectively 16.0 and 2.5 per cent. of those of school-going age. The number of educational institutions, public and private, in that year was 1,084 : namely, 16 secondary, 918 primary, and 150 special schools. The expenditure on education was Rs. 1,29,000, of which Rs. 9,000 was met from Provincial funds, Rs. 39,000 from District funds, Rs. 1,100 from municipal funds, and Rs. 49,000 from fees.

Medical. In 1903 the District contained 17 dispensaries, of which 6 had accommodation for 59 in-patients. The cases of 66,000

out-patients and 704 in-patients were treated during the year, and 1,851 operations were performed. The expenditure was Rs. 24,000 and the income Rs. 34,000, of which Rs. 3,000 was derived from Government contributions, Rs. 7,000 from Local and Rs. 4,000 from municipal funds, and Rs. 14,000 from subscriptions.

Vaccination is compulsory only within the Purnea and Kishanganj municipalities. The number of successful operations in 1903-4 was 61,000, or 33·2 per 1,000 of the population.

[M. Martin, *Eastern India*, vol. iii (1838); Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xv (1877).]

Purnea Subdivision.—Head-quarters subdivision of Purnea District, Bengal, lying between 25° 15' and 26° 7' N. and 87° 0' and 87° 56' E., with an area of 2,571 square miles. The subdivision is a low-lying alluvial tract, bounded on the south by the Ganges. The west is liable to inundation from the Kosi river, and part of the east from the Mahānandā, which have covered large areas with sterile sand; to the south there are numerous swamps. The population in 1901 was 838,333, compared with 861,194 in 1891, the decrease being due to general unhealthiness, and to a serious epidemic of cholera which took place in 1900. It contains two towns, PURNEA (population, 14,007), the head-quarters, and the important railway junction of KATIHĀR (9,761); and 1,528 villages. It is the most sparsely populated subdivision in North Bihār, the density being only 326 per square mile. The chief markets are at Purnea, Katihār, KASBA, Phulbāria, Ichāmatī, and BĀRSOI; and a fair of long standing is held at KARĀGOLA.

Arāriā Subdivision.—North-western subdivision of Purnea District, Bengal, bordering on Nepāl and lying between 25° 56' and 26° 35' N. and 87° 3' and 87° 42' E., with an area of 1,077 square miles. The subdivision is an extension of the great alluvial plain of North Bihār, and is intersected by streams flowing southwards from the Himālayas. The population in 1901 was 416,985, compared with 432,425 in 1891, the density being 387 persons per square mile. It contains 600 villages, one of which, BASANTPUR, is the head-quarters; but no town. The principal marts are Basantpur, FORBESGANJ, and Rāniganj, and large cattle fairs are held at Madanpur and Chandradihi. In the Rāniganj *thāna* there are extensive pasture lands, and large numbers of buffaloes are reared, clarified butter (*ghī*) forming an important export.

Kishanganj Subdivision.—North-eastern subdivision of Purnea District, Bengal, bordering on Nepāl and lying between $25^{\circ} 54'$ and $26^{\circ} 35'$ N. and $87^{\circ} 37'$ and $88^{\circ} 32'$ E., with an area of 1,346 square miles. The subdivision is a fertile alluvial tract stretching southwards from the Nepāl *tarai*. The population in 1901 was 619,476, compared with 651,039 in 1891. It contains one town, KISHANGANJ (population, 7,671), the head-quarters; and 1,227 villages. The public offices are at present situated at the village of Bhariadāngi,^f 4 miles north-west of the town; but the courts will shortly be removed to Kishanganj town, where buildings are under construction. The subdivision is the most fertile portion of the District, and is more densely populated than the rest, supporting 460 persons to the square mile. It is more nearly allied to the neighbouring Districts of North Bengal than to Bihār, and the majority of the inhabitants are of Rājibansi (Koch) origin, though most of them are now converts to Islām. The chief markets are at Kishanganj town, Phulbāria, Bibiganj, Gandharbdānga, and Islāmpur.

Bārsoi.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in $25^{\circ} 38'$ N. and $87^{\circ} 53'$ E., on the east bank of the Mahānandā. Population (1901), 3,101. It is a railway junction on the Eastern Bengal State Railway, from which a branch runs to Kishanganj. Bārsoi has one of the largest weekly markets in the District, the chief articles of trade being dried fish, tortoises, *gur*, country-made cloth, chillies, turmeric, onions, jute, and mustard. Gunny-bags and mats of local manufacture are also largely sold.

Basantpur.—Head-quarters of the Arāriā subdivision of Purnea District, Bengal, situated in $26^{\circ} 18'$ N. and $87^{\circ} 33'$ E., on the right bank of the Panār river. Population (1901), 2,792. Basantpur is 4 miles west of Arāriā village, which gives its name to the subdivision, and it contains the usual subdivisional offices; the sub-jail has accommodation for 17 prisoners.

Forbesganj.—Village in the Arāriā subdivision of Purnea District, Bengal, situated in $26^{\circ} 19'$ N. and $87^{\circ} 16'$ E. Population (1901), 2,029. It lies on the Eastern Bengal State Railway and is a market of growing importance, the chief articles of commerce being jute, grain, and piece-goods; there are two steam jute-presses. Forbesganj contains a number of Mārwarī merchants, some of whom conduct a trans-frontier trade with Nepāl.

Kārāgola.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in $25^{\circ} 24'$ N. and $87^{\circ} 28'$ E.,

on the left bank of the Ganges. Kārāgola is on the old route from Calcutta to Darjeeling, and is a place of call of the Ganges Dispatch Service, though the steamer now touches 2 miles below the village. The fair held here was formerly one of the largest in Bengal, but has recently lost much of its importance. It takes place at the time of the full moon in the month of Māgh (about February); and a brisk trade is carried on in nuts and spices, as well as in tents, carpets, and wooden furniture imported from Monghyr.

Kasbā.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in $25^{\circ} 51' N.$ and $87^{\circ} 32' E.$, on the road from Purnea town to Arāriā, about 9 miles from the former. Population (1901), 7,600. Kasbā, which lies on the Eastern Bengal State Railway, is the chief centre of the rice trade in Purnea District, the paddy being collected from the north of the District and the submontane portions of Darjeeling for export to Calcutta. It has also become a large centre of the jute trade, the annual sales amounting to over 10 lakhs; and a European firm has an agency here.

Katihār.—Town in the head-quarters subdivision of Purnea District, Bengal, situated in $25^{\circ} 34' N.$ and $87^{\circ} 35' E.$ Population (1901), 9,761. Katihār, which was formerly known as Saifganj, is an important railway junction, at which the Bengal and North-Western Railway meets the Bihār section of the Eastern Bengal State Railway. The latter is continued to Manihārī Ghāt on the Ganges, whence a steamer plies to Sakrigāli, establishing communication also with the East Indian Railway. There is a large export of rice and mustard seed. The town is the head-quarters of the sheep-breeding trade, and rough blankets are manufactured by a colony of Gareris settled here.

Kishanganj Town.—Head-quarters of the subdivision of the same name in Purnea District, Bengal, situated in $26^{\circ} 7' N.$ and $87^{\circ} 56' E.$, on the Ganges-Darjeeling road, east of the Mahānandā river. Population (1901), 7,671. Kishanganj is a large exporting centre for rice and jute. It was constituted a municipality in 1887. The income during the decade ending 1901-2 averaged Rs. 7,500, and the expenditure Rs. 6,800. In 1903-4 the income, which is mainly derived from a tax on persons (or property tax), was Rs. 12,000; and the expenditure was Rs. 8,000. The public offices are at present situated about 4 miles from the town, but new courts are being built at Kishanganj; the sub-jail has accommodation for 23 prisoners. The town contains the head office of the Khagrā

Ward's estate ; a great fair is held annually under the auspices of the estate, which is attended by about 100,000 persons. A great number of elephants, camels, ponies, sheep, and cattle are sold, and much general merchandise changes hands ; the camels are in great demand for sacrifice by Musalmāns at the Bakr-Id festival. Cart-wheels are largely manufactured in the neighbouring village of Chākla, which are used throughout the District and are also exported.

Manihāri.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in $25^{\circ} 20' \text{ N.}$ and $87^{\circ} 37' \text{ E.}$, on the north bank of the Ganges. Population (1901), 3,759. It is a terminus of the Bihār section of the Eastern Bengal State Railway, connected by ferry steamer with the East Indian Railway station at Sakrigāli Ghāt, and a place of call for river steamers.

Purnea Town.—Head-quarters of Purnea District, Bengal, situated in $25^{\circ} 46' \text{ N.}$ and $87^{\circ} 28' \text{ E.}$, on the east bank of the Saurā river. The population in 1901 was 14,007 ; but it has declined steadily for many years, owing to the unhealthiness consequent on the silting up of the Kālī Kosi river, which was once the bed of the Great Kosi. Purnea was constituted a municipality in 1864. The income during the decade ending 1901-2 averaged Rs. 22,000, and the expenditure Rs. 19,000, a portion of which was devoted to a drainage scheme. In 1903-4 the income was Rs. 35,000, of which Rs. 14,000 was derived from a tax on houses and lands, and Rs. 5,000 from a conservancy rate ; and the expenditure was Rs. 28,000. The town contains the usual public offices. The District jail has accommodation for 246 prisoners ; and the principal jail industries are the manufacture of carpets and mats, mustard oil, oil-cake, and *newār* or coarse tape. The products are disposed of locally, except the *newār*, which is sent to the Buxar Central jail.

Boun-
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Darjeeling District.—Frontier District forming the most northerly portion of the Bhāgalpur Division of Bengal, lying between $26^{\circ} 31' \text{ and } 27^{\circ} 13' \text{ N.}$ and $87^{\circ} 59' \text{ and } 88^{\circ} 53' \text{ E.}$, with an area of 1,164 square miles. It runs up between Nepāl on the west and Bhutān on the north-east to Sikkim on the north. It is separated from Sikkim by a series of rivers and mountain torrents, and from Nepāl by the Singālilā chain of mountains ; on the east and south it marches with the Districts of Jalpaiguri and Purnea.

The District contains two distinct tracts : the ridges and deep valleys of the Lower Himālayas, and the *tarai* or level

country at their base. The elevation of the latter is only 300 feet above sea-level; and the mountains tower abruptly from the plains in spurs reaching to 6,000 and 10,000 feet, many of them densely clothed with forest to their summits. The mountain slopes, from about 6,000 feet downwards, are dotted with trim tea gardens, interspersed with small tracts of land reserved by Government for native cultivators. The *tarai* was formerly overgrown with dense malarious jungle, amid which the aboriginal tribes of Mech, Dhimals, and Koch burnt clearings and reared crops of rice and cotton on a system of primitive nomadic husbandry; but it has now been extensively cleared for settled tillage and for tea gardens.

The scenery is of a magnificent character. The spectator in Darjeeling town stands on the stage of a vast amphitheatre of mountains, which in the spring form a continuous snowy barrier extending over 150 degrees of the horizon from Gipmochi on his right to Sandakphū on his left. The sides of the amphitheatre are formed by the Singālilā chain 20 miles to the west, and by the loftier Chola range 40 miles away on the east. In front of him, at a distance of only 45 miles, the great twin peaks of Kinchinjunga tower above the titanic group of snowy mountains which fills the northern horizon. Flanked on the west by Kabru and Jāno, and on the east by Pandim, Narsingh, and Dz, Kinchinjunga completely dominates the landscape. The rising sun sheds a golden radiance on the eastern slopes, which turns to dazzling whiteness as the day wears on. At evening the western flanks catch all the rosy glow of sunset, and as the sun sinks behind the hills the crimson hues fade away only to reappear in a delicate afterglow. At last even this disappears; but if the moon be near the full, its light streams down upon the snows, outlining their contours with an awful purity. Unfortunately, except for a short time in May and in the early winter months, this gorgeous panorama is more often than not hidden by a thick mist, which lifts only at rare intervals for a few hours at a time.

From the great backbone of the Himālayas, which runs east and west along the northern boundary of Sikkim, the SINGĀLILĀ range juts nearly due south, forming the boundary, first between Nepāl and Sikkim, and then between Nepāl and Darjeeling District. At the station itself three minor ridges converge. One climbs due west to TANGLŪ (10,074 feet) on the Singālilā range; a second branches east to Senchal (8,163 feet) and north-east to Pashok (3,300 feet); the third descends

due south to KURSEONG, and thence south-east to the plains. It is along the last ridge that the Darjeeling-Himālayan Railway climbs. The highest peaks on the Singālilā range are PHALŪT (11,811 feet), SABARGAM (11,636 feet), and SANDAKPHŪ (11,930 feet). The station of Darjeeling itself has an elevation of 7,002 feet at the Chaurāsta, or four cross-roads.

The mountains are roughly divided for administrative purposes into three distinct tracts. The ridges above 6,000 feet and the valleys below 3,000 feet are 'reserved' as forests; between these altitudes the slopes east of the Tista river have been set apart for native cultivation, which usually extends down to about 2,000 feet; while in the country west of that river little but tea is grown.

The chief rivers are the TISTA, the Mahānadī (MAHĀNANDĀ), and the Bālāsan. The chief tributaries of the Tista are the Rangpo and Rillī on the left bank, and on the right the Great Rangit, Rangjo, Rayeng, and Sivok; a little below its junction with the Great Rangit, where one of the most picturesque views in the District can be obtained, the Tista is spanned by a fine suspension bridge. The Mahānadī is a smaller stream and obtains its full volume only after leaving the District. The Bālāsan takes its rise a few miles south-west of Darjeeling and after a southerly course enters the *tarai*, where it divides into two streams, one of which, the New Bālāsan, branches off and joins the Mahānadī, while the parent stream continues its southerly course into Purnea District. Its two main tributaries in Darjeeling District are the Rangbang on the right, and the Rinchingtong on the left bank. The Ram-mān river, which is a tributary of the Great Rangit, and forms for some distance the boundary between Darjeeling District and Sikkim, is crossed by a curious natural bridge of stone between the junction of the Ratho and the Shirī with this river.

Geology. Gneiss of the well-foliated type, frequently passing into mica schist, covers the greater portion of the District. Sub-metamorphic or transition rocks, known as the Dāling series, are well represented in the Tista and the Rangit valleys, and in the outer hills between Kurseong and Tindhāria, and near Pankhābāri. They consist mainly of light green and dark greenish-grey, slightly greasy slates passing insensibly into ordinary clay slates, more or less earthy or silvery according to the degree of metamorphism they have undergone. Associated with them occur bands of quartzite and quartz flags, and occasionally hornblende schist, sometimes slightly calcareous and passing into dolomite. Upper Tertiary rocks (sandstones,

conglomerates, and clays) occur as a narrow band fringing the base of the Himālayas, while intervening between the Sub-metamorphics and the Tertiaries there is a thin band of Lower Gondwāna rocks, including various alternations of sandstone or quartzite, shales, slates, and beds of friable coal¹.

The mountain slopes, where not cleared for cultivation, are Botany. densely clothed with shady forests. Along the banks of the larger streams and from 1,500 to 2,000 feet up the mountain ridges is a tropical forest, which extends also across the level *tarai* at the base of the outer spurs. On dry slopes in the hills and along old river-beds in the *tarai* there is little undergrowth, but elsewhere this is dense and luxuriant. The important trees will be mentioned in the section on Forests. Ferns are very numerous and mosses are abundant, while epiphytic orchids and *Vacciniaceae* are plentiful. The orchids, however, cease to be abundant at 8,000 feet, from which level rhododendrons become common. At 10,000 feet on Phalūt gregarious conifers appear. The sub-Alpine element, consisting of *Gentiana*, *Primula*, *Pedicularis*, *Meconopsis*, and similar genera, is not largely represented within the District, which only touches this zone on Phalūt in the west and on Rishi La in the east; the truly Alpine zone of vegetation is not met with.

The black bear (*Ursus torquatus*) and a smaller bear Fauna. (? *Melursus ursinus*) are met with between 3,000 and 11,000 feet, and are seen most often in the rains when the maize is ripening. Leopards are occasionally found at all altitudes, and the cat-bear (*Aelurus fulgens*) from 7,000 to 10,000 feet. A goat antelope, the *serow* (*Nemorhaedus bubalinus*), sometimes incorrectly identified with the *thār*, is still found between 5,000 and 10,000 feet. A few *goral* (*Cemas goral*) roam the crags between 4,000 and 6,000 feet, and barking-deer (*Cervulus muntjac*) are common. Musk deer are very rare and are found only above 10,000 feet. In the *tarai*, tiger, rhinoceros, deer, wild hog, and a species of dwarf hog (*Sus salvanius*) are not uncommon, and a few elephants are still found. Good mahseer fishing is to be had in the Tista.

At Darjeeling town (7,346 feet), the mean temperature is about 42° in the cold season, and rises to 59° in May. It

Tempera-
ture and
rainfall.

¹ *Memoirs, Geological Survey of India*, vol. xi, pt. i, 'Geology of Darjeeling and Western Duārs,' by F. R. Mallet; *Records, Geological Survey of India*, vol. xxiii, pt. iv, 'The Darjeeling Coal between the Lisu and the Ramthi Rivers,' by P. N. Bose; and vol. xxiv, pt. iv, 'Further Note on the Darjeeling Coal Exploration,' by P. N. Bose.

remains steady at about 60° from June to September, and then falls rapidly to 41° in January. The lowest average minimum temperature is 35° in January, and the highest mean maximum 66° in July and August. Humidity is high, and rainfall is general and very heavy from June to September, especially on the lower slopes. The annual fall for the whole District averages 126 inches, of which 11 inches are received in May, 27 in June, 35 in July, 23 in August, and 16 in September. In such hilly country the rainfall varies widely over the District. The ridges nearest to the plains catch the full force of the monsoon and have double the fall of those farther to the north.

Natural
calamities.

On September 24, 1899, the District was visited by a terrible cyclone accompanied by excessive rainfall, which caused great loss of life and property, especially in DARJEELING TOWN. Up to that date the fall had been 17 inches in excess of the average, and during the storm a fall of 29.4 inches was recorded in the Tiger Hill tea estate south-west of Ghum. The loss of life amounted to 300, including 10 Europeans and 62 natives in the town, and 67 at Pul Bāzār, where the Little Rangit rose 30 to 50 feet, carrying all before it. Damage to public property was estimated at nearly 8 lakhs, of which repairs to Provincial roads and bridges cost 5 lakhs, the chief items being the Darjeeling hill cart-road (1 $\frac{3}{4}$ lakhs) and the Tista valley road (1 $\frac{1}{4}$ lakhs). The injury to private property amounted to 15 $\frac{1}{2}$ lakhs, the tea industry suffering to the extent of nearly 11 lakhs. The earthquake of 1897 also caused great damage in Darjeeling town.

History.

The history of Darjeeling presents a late chapter in the extension of British rule. The Gurkha War of 1814-6 first brought the Company into direct relations with this region. It was then found that the aggressive Gurkhas had appropriated from the Rājā of Sikkim the Morang or *tarai* portion of the present District; and it was one of the articles of the treaty of 1816 that this strip should be ceded to the British, who immediately restored it to Sikkim. In 1835, under the Governor-Generalship of Lord William Bentinck, the nucleus of what was originally known as 'British Sikkim' was created by the purchase, from the Rājā of Sikkim, of the sanitarium of Darjeeling, with some of the surrounding hills, in consideration of an allowance of Rs. 3,000, afterwards increased to Rs. 12,000 per annum. This allowance was finally stopped, in consequence of the Rājā's improper conduct in connexion with the Sikkim expedition of 1888. The ceded tract, which

contained about 138 square miles, is described in the deed of grant as 'all the land south of the Great Rangit river, east of the Bālāsan, Kāhel, and Little Rangit rivers, and west of the Rangbī and Mahānandā rivers.' Darjeeling soon became a favourite summer retreat for the officials of Bengal and their families, and it was established as a sanitarium for invalided European soldiers. In 1849 Dr. Hooker paid it a visit, and described his experiences in his well-known and most interesting *Himālayan Journals* (2 vols., 1854). His visit was also productive of important political consequences. With the sanction of the British Government and with the express permission of the Rājā of Sikkim, he had crossed the frontier into that State, accompanied by Dr. Campbell, the Superintendent of Darjeeling District. There they were treacherously seized and imprisoned by the authority of the Rājā's *ḍiwān* or minister. A military expedition was dispatched to rescue the prisoners and avenge the insult; the yearly allowance granted to the Rājā was stopped, and the Sikkim *tarai*, at the foot of the hills, was annexed, while British territory in the mountains was considerably extended. In all, about 640 square miles of land were acquired on this occasion. Finally in 1866 a hilly tract of 486 square miles, east of the Tista, which was annexed from Bhutān in 1865 and now forms the Kālimpong police-circle, was incorporated in the District.

The population increased from 94,996 in 1872 to 155,645 ^{The} in 1881, 223,314 in 1891, and 249,117 in 1901. ^{people.} The Census of 1872 was admittedly inaccurate, and in 1881 there were doubtless many omissions; but even after liberal allowances have been made for error, the figures show a remarkable growth of population. The climate of the hills is very healthy and the death-rate low; but the *tarai* is notoriously malarious, and the mortality there is always very heavy. In the Siliguri *thāna* the recorded death-rate during the ten years ending 1901 averaged 59·8 per 1,000, and the birth-rate only 19·4. The birth-rate throughout the District is low; but this is partly owing to the preponderance of males among the large immigrant population, there being only 87 women to every 100 men in the District. More than three-quarters of the deaths are due to fever, and more than a tenth to dysentery and diarrhoea. In the hills goitre is endemic, and the number of deaf-mutes is also high.

The table on the next page gives particulars of the population of each subdivision in 1901.

The two towns are DARJEELING, the head-quarters, and

KURSEONG. The hilly part of the District contains nothing corresponding to a village in the ordinary sense of the word, as nearly all the land, with the exception of Government forest, is parcelled out into tea gardens and Government estates, or *khās mahāls*, and even in the *tarai* the social unit is not the village characteristic of the rest of India but the farm.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write
		Towns.	Villages.				
Darjeeling .	726	1	181	133,386	184	+ 26.2	10,295
Kurseong .	438	1	388	115,731	264	- 1.6	7,147
District total	1,164	2	569	249,117	214	+ 11.5	17,442

During the decade ending 1901 the greatest increase of population (55.9 per cent.) took place in Kālimpong, which had in 1891 only 65 persons per square mile; here the waste land is being rapidly brought under cultivation by new settlers, chiefly from Nepāl, but it is still the most sparsely populated area in the District, supporting only 101 persons per square mile. The remainder of the head-quarters subdivision also showed a fair growth, the tea gardens adding 5,000, or more than 12 per cent., to their population. The decrease in the Kurseong subdivision was chiefly due to the extreme unhealthiness of the Siligūrī *thāna*, where the loss would have been far greater but for the large influx of coolies for the tea gardens. Nearly half the total population are foreigners. The majority (76,000) are natives of Nepāl, but a large number come also from Chotā Nāgpur, the Santāl Parganas, Bihār, and the United Provinces. There is a steady flow of immigration from Sikkin to Kālimpong, where the land revenue assessment is very low. About half the people speak languages of the Tibeto-Burman family, of which nineteen different dialects were shown in the Census returns of 1901, the most common being Khambū, Murmī, Limbū, Lepchā, and Mangar. Nearly one-fifth speak Khas, a bastard form of Hindī derived by the Khas from their Hindu ancestors; it is known as Khas-kura, and has become the *lingua franca* of Nepāl. Bengali and Hindī are spoken by people from the plains, while immigrant Oraons, Mundās, and Santāls from the Chotā Nāgpur plateau speak their own languages. In 1901, 187,869 persons, or more than three-quarters of the population, in-

cluding most of the Nepālese, returned themselves as Hindus. Buddhists numbered 44,044, including the Murmīs, Lepchās, and Bhotiās. Musalmāns, found chiefly in the Siliguri *thāna*, formed less than 4 per cent. of the total population, and Christians and Animists between 1 and 2 per cent. each.

Considerably more than half the population (134,000) are Nepālese, and of the rest 29,000 are Rājbandsis, or rather Koch, 10,000 Lepchās, and 8,000 Bhotiās. All the great Nepāl castes are well represented, the most numerous being the Khambū, Murmī, Limbū, and Khas. Lepchā is the nickname given by the Nepālese to a Mongoloid tribe who call themselves Rong, and claim to be the aboriginal inhabitants of SIKKIM; an account of them will be found in the article on that State. Of the Bhotiās, 3,446 are known as Sharpā Bhotiās and come from Nepāl; 2,357 come from Bhutān, and 1,547 from Sikkim. An account of these people will be found in the article on BHUTĀN. The Oraons, Mundās, and Santāls reside almost exclusively in the Siliguri *thāna*, where they are employed as coolies on the tea gardens. Nearly 1,700 Tibetans were enumerated in the District. The number of Europeans was 1,292. Of the total population, 78 per cent. are engaged in agriculture (half of them on tea gardens), 7 per cent. in manual industries, 1 per cent. in commerce, and the same proportion in the professions.

Christians number 4,467. The Church of Scotland Mission works among the hill tribes, and has secured a large number of converts, principally among the Lepchās, of whom 1,300 are Christians. The mission has branches in Sikkim, the Duārs, and Kālimpong, the last being the most important. It does most useful educational work and maintains 58 schools with 1,655 scholars; the Colonial Homes at Kālimpong were started under its auspices. Great progress has been made during the last decade, the number of native Christians having risen from 298 to 2,829. A Roman Catholic mission has branches at Darjeeling and Kurseong, and a second Roman Catholic mission works at Pedong, under the Bishop of Tibet, with a branch at Maria-bastī.

Agriculturally the District is divided into three tracts: the mountains west of the Tista river, Kālimpong, and the *tarai*. At the time of cession the western mountains were wholly covered with forest, and were very sparsely populated; almost all the slopes are now under tea, and two-thirds of the population outside the municipality and cantonments are resident on the tea gardens. Kālimpong contains only four

tea gardens, and the greater part of the area is reserved for native cultivation, five-sixths of the inhabitants being settled on the Government estate. The *tarai* contains a number of tea plantations along the foot of the hills, but there are also extensive areas under ordinary cultivation, and the tea garden population is barely one-fifth of the total.

A distinctive feature of Himālayan agriculture is the terracing of the mountain slopes for rice cultivation. On steep slopes the labour of revetting the narrow terraces with stones is very great; but as the site of a rice-field is always selected so that it can be irrigated from some stream, the crop is a certain one and amply repays the labour expended. The incline of the slope, the aspect, and the elevation are important factors in the relative fertility of such lands. Many of the terraces are too narrow to admit the use of a plough, and these are cultivated with a hoe. The nomadic method of agriculture known as *jhūm*, which consists in burning down a fresh patch of jungle land each successive year, has practically ceased, as most of the forests in the District are now reserved by the Forest department. Bengali and Nepālese cultivators use the plough, and plough cultivation has also been adopted by the aboriginal tribes, especially east of the Tista. The hill chopper known as *dao* or *kukri* is widely used for all rustic operations. The Nepālese are by far the most enterprising cultivators, and special measures are necessary to protect the indigenous Lepchās from being ousted by them.

Chief agricultural statistics and principal crops.

The principal agricultural statistics of the District for 1903-4 are shown below, in square miles :—

Subdivision.	Total.	Cultivated	Cultivable waste	Forests.
Darjeeling . .	726	116	27	326
Kurseong . .	438	135	17	107
Total	1,164	251	44	433

Rice, which occupies nearly a third of the cultivated area, is the only food-grain grown in the *tarai*, the winter crop being the most important. In the hills Indian corn forms a valuable staple in Kālimpong, and the area under it amounts to more than three-quarters of the net cropped area. The average yield of Indian corn on the best hill lands is about 18 maunds per acre, and on inferior lands 9 maunds. In the *tarai* the yield of rice per acre varies from 4 to 10 maunds. In the hills, millets, such as *maruā* (*Eleusine coracana*), wheat,

potatoes, and cardamoms are grown wherever practicable. Subordinate crops in the plains are cotton, jute, which is encroaching on the rice area, pulses, oilseeds, and sugar-cane.

The staple industry of Darjeeling is the cultivation and Tea-manufacture of tea, conducted almost entirely by means of English capital and under skilled European supervision. Its introduction into Darjeeling is due to Captain James, who persuaded Government to obtain seed from China, which he distributed among residents of the District to experiment with. The experiments were successful, and in 1856 the first tea gardens were opened at Alubāri, Pandam, and Steinthal. The industry has prospered; the number of gardens in 1903 was 169 with an area of 242 square miles, the acreage actually under tea representing 32 per cent. of the net cropped area of the District and the output of tea exceeding 12,000,000 lb. The speciality of Darjeeling teas is their fine flavour, which always commands high prices and compensates for a smaller yield per acre than is obtained in the plains. The principal pests which tea planters have to contend with are the red spider, green-fly, and mosquito blights. The last causes most trouble in the *tarai* and the lower ranges; while red spider is a terrible scourge on gardens at a higher elevation.

The supply of labour is on the whole plentiful and of good quality, as the work is comparatively light and well paid. In the hills the coolies are mainly Nepālese, while in the *tarai* Santāls and kindred tribes predominate; women and children are largely employed in plucking and sorting.

The cultivation of those species of cinchona which contain Cinchona-quinine and allied febrifuge alkaloids was begun in 1864 in the Rāngjo valley 12 miles south-east of Darjeeling, and in 1874 cinchona febrifuge was manufactured for the first time in the Mangpū factory. In 1887 the manufacture of sulphate of quinine was commenced by a process of extraction by fusel oil, and has since been greatly extended. The issues of quinine in 1903-4 amounted to over 12,000 lb., of which 3,900 lb. were made up by the Jail department into pice-packets, each containing 7 grains, for sale at post offices. In 1904 the Government cinchona plantations comprised 900 acres in the Rangbī and Mangpū divisions in the Rangjo valley, 600 acres in the Sītong and Lābda divisions in the Rayeng valley, and 360 acres in the Rangpo valley; the total number of plants approached $4\frac{1}{2}$ millions.

A good deal has been done to distribute improved seed for Improvements in various crops, and some remarkably fine maize has been grown

agricul-
tural
practice.

in Kālimpong from American seed. Efforts have been made to extend the growth of potatoes, but blight has proved very destructive hitherto. Oranges and other fruit trees have been successfully grown at Kālimpong. Rice cultivation is spreading steadily in the mountains, especially in the east of the District. Little use has been made of the Agriculturists' and Land Improvement Loans Acts until recently; but Rs. 2,800 was advanced under the former Act in 1906 to the ryots in the Kālimpong Government estate, in consequence of the partial failure of the maize crops on which they mainly depend.

Cattle,
ponies, and
sheep.

The common domestic animals of the *tarai* do not differ from those found elsewhere in Bengal; but in the hills there are two special breeds of mountain cattle, the Siri and the Nepālī, a cross between the two being called *kachchā* Siri. The former are large and rough-coated, and the latter small and smooth-skinned; both breeds are good climbers, and thrive in the forests. The Nepālese cultivators use a few bullocks for their ploughs, but most of the animals are kept for slaughter or transport. The Sharpā Bhotiās from Nepāl and other Nepālese tribes, as well as the Bhutānese Bhotiās and Lepchās, graze large herds of buffaloes and cows. The small but sturdy breed of Bhotia ponies introduced from Tibet and Bhutān is well-known. They are coarse-bred animals with upright shoulders, ugly heads, and great bone; but they are valued for their sure-footedness and great endurance, and are used both as pack animals and for riding. Mules are imported from Tibet to Kālimpong, where Government buys them for transport. The Nepālese Gurungs graze large flocks of sheep, taking them to the heights during the rains, and in the cold season bringing them down to the plains for sale. The principal pasture grounds are the 'reserved' forests. In the cold and hot seasons the lower ranges are used; but, as the rains approach, the scourge of leeches drives the cattle and sheep up to the higher mountains between 10,000 and 12,000 feet. English poultry have been imported and have retained their original characteristics to a remarkable degree. An important fair is held annually at KĀLIMPONG.

Irrigation.

Irrigation is not practised on a large scale, but throughout the *tarai* and in the hills natural facilities are industriously utilized wherever they are to be found.

Forests.

The 'reserved' forests cover an area of 433 square miles and, with the exception of a few small areas under the Deputy-Commissioner, are worked by the Forest department. There are probably few places in which so many different types exist

within so small an area. Above 8,000 feet clumps of silver fir (*Abies Webbiana*) clothe the grassy slopes, which are dotted here and there with the whitened stems of dead trees. These, which gradually merge into rhododendron forest, are so inaccessible as to yield no profit. Lower down are bamboos, which at 6,000 feet give way to forests of chestnut, maple, oak, magnolia, and laurel, the chief source of supply of timber and firewood for the station of Darjeeling. Still lower the oak disappears, and maple, birch, alder, and *Bucklandia* are the chief species. These are again replaced at 4,000 feet by mixed timber, which, with the exception of the *tun* (*Cedrela Toona*), is of little value save for fuel. At 3,000 feet the upper limit of the *sāl* (*Shorea robusta*) is reached; and this tree is the chief constituent of the valuable forests in the lower hills, extending from the extreme west of the District to the Chel river on the east, where it ceases abruptly, probably owing to a change in geological formation. Besides *sāl*, the *tarai* contains swamp, river-bed, and savannah forests, the last now rare owing to years of fire-protection. Cattle-grazing is ordinarily allowed. Regular plantations are few and unimportant; but some teak has been planted at Bāmanpokri, *Bucklandia* near Rangirun, and rubber in the low valleys. In 1903-4 the forests yielded a revenue of 2.62 lakhs. The Mech in the plains and the Nepālese and Lepchās in the mountains collect for sale small quantities of minor jungle products, such as aconite, madder, and chiretta.

The mineral products include coal, iron, copper, calcareous Minerals. tufa, and slate; but very few of these are now worked. In 1873 Mr. Mallet of the Geological Survey reported that the coal-measures, though easily exposed, were of a peculiarly friable character, and not worth exploiting. A colliery at Dāling had an output in 1900-1 of 1,489 tons, but was not worked in 1903-4. Copper ores (chiefly copper pyrites) occur in rocks of the Dāling series, and a licence to prospect for copper and limestone at Kumai has recently been granted. Almost the only accessory minerals are kyanite, schorl, and garnet, the two last often forming large-sized crystals.

Coarse cotton cloth is woven by all the aboriginal tribes, Arts and especially by the Lepchās. There are breweries at Sonāda manufactures. and St. Mary's, Kurseong, and the out-turn of beer in 1903-4 was 70,000 gallons. The railway works at Tindhāria employ a daily average of 110 operatives.

The main trade is with Calcutta, the chief exports being tea, Commerce. jute, and gunny-bags, and the imports European piece-goods,

kerosene oil, and salt. Rice is imported from Dinājpur and coal and coke from Burdwān. From Nepāl food-grains, cotton piece-goods, manufactured wool and hides, sheep, goats, cattle, and poultry are imported, in return for European piece-goods and cotton twist, salt, kerosene oil, tobacco, and food-grains. The trade with Sikkim is of much the same character, but less in extent. Most of the Bhutān trade passes through Jalpaiguri District. A little wool is brought from Tibet on mules to Kālīmping, whence it is carted to Siliguri, but the trade is much hampered by the jealousy of the Tibetan authorities. The Darjeeling-Himālayan Railway carries most of the traffic in the west of the District, but in the east transport is by bullock carts and pack ponies along the Tista road. DARJEELING TOWN, KĀLIMPONG, KURSEONG, and SILIGURI are the chief trade centres. Other places of less importance are Pedong on the Tibetan trade route, Sombāri at the end of the Chel valley, a mart for hill products, and Mātigarā and Naksalbāri in the *tarai*.

Railways
and roads.

The Darjeeling-Himālayan Railway and the cart road over which it runs connect Siliguri with Darjeeling. Other important roads are those connecting the Tista bridge with Darjeeling town via Rangit, which has been greatly damaged by landslips, and with Jorbangala via Pashok; the road from Siliguri to Rhenok on the Sikkim frontier, and thence to the Jelep La pass; and the roads from Ghum via Simāna Bāstī to Phalūt, from Rikisum junction via Mimglās and Gorubathān to Jungi guard, from Kurseong via Pankhābāri to Mātigarā, from Mātigarā to Naksalbāri, and from Naksalbāri to Gārdhura. There are in all 642 miles of roads, of which 343 miles are under the supervision of the District road cess committee, and the remainder under the Public Works department.

District
subdivi-
sions and
staff.

For administrative purposes the District, which is 'non-regulation,' is divided into two subdivisions, with head-quarters at DARJEELING TOWN and KURSEONG. The staff subordinate to the Deputy-Commissioner at head-quarters consist of a covenanted Civilian and two Deputy-Magistrate-Collectors; a covenanted Civilian is in charge of the Kurseong subdivision and a Deputy-Magistrate-Collector is stationed at Siliguri. The District staff also includes a Civil Surgeon, besides a resident medical officer at the Eden Sanitarium, three Deputy-Conservators of forests, an Executive Engineer and an Assistant Engineer belonging to the Public Works department.

Civil and
criminal
justice.

The courts are those of the District and Sessions Judge of Purnea, in whose jurisdiction Darjeeling is included, and of

seven magistrates, four of whom also try petty civil suits. In the hills the people are remarkably law-abiding, and heinous crimes are comparatively rare. Offences against the person, accompanied with violence, are however fairly common, while dacoities are occasionally committed in the *tarai*.

The District is divided into four separate tracts, in each of which a different revenue system prevails. In the original Darjeeling territory ceded in 1835 there was at first little demand for land, and applications were dealt with by the Superintendent at his discretion. In 1838, however, a very large number of applications for building sites were made to Government; and this led to the issue in 1839 of a set of rules for the grant of lands which, while protecting existing rights, placed certain restrictions on future grants. These were subsequently modified; and the lands in this tract may now be classified as freehold tenures, revenue-paying tenures, and lands held by Government. In 1850 a second tract of 116 square miles in the north-west of the District was acquired, and shortly afterwards granted to Chebu Lāma for services rendered. Of this area, about 66 square miles were subsequently purchased by the Forest department in 1881, and the remainder is still held at a revenue of Rs. 1,000 fixed in perpetuity. The third tract embraces strips along the Nepāl boundary on the west, and along the Tista on the east, and Kālimpong. These are *khās mahāls*, or Government estates managed direct, and have undergone various resettlements. A poll tax was originally levied; but this was gradually replaced by block rates, which were uniform throughout each block, but which varied from block to block according to fertility and accessibility. The block rates have in their turn given way to a more elaborate classification of the lands within each block. Lastly the *tarai*, which was resettled in 1895-8, comprises chiefly holdings under *jotdāri* leases and tea grants. The rights of the *jotdārs* are heritable and transferable, and they pay rent direct to Government; subordinate to them are under-tenants (*chukānidārs*) who again sublet to *ādhiārs*. The latter are labourers paid in kind rather than tenants; they obtain from their lessor the seed, the use of ploughs, and often advances of food, and give him in return half the produce.

The tea lands are leased for varying terms up to thirty years. The rates of rent vary; near Darjeeling and in the *tarai* 6 annas an acre is the ordinary rate, while in Kālimpong, and in a few cases in Darjeeling, it is R. 1. Ordinary rents vary in the hilly area from 4 annas to Rs. 1-4 per acre, old fallow

paying 2 or 3 annas per acre according to locality. In the *tarai* the prevailing rate is 3 annas for old, and 10 annas for new fallow, 4 to 10 annas for uplands (*faringati*), 8 annas for homestead, Rs. 1-4 to Rs. 2 for lowlands (*rupit*), and Rs. 1-8 for tea and lands under *sāl* (*Shorea robusta*).

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	50	1,22	1,58	1,66
Total revenue . .	1,62	3,79	5,45	6,00

Local and municipal government. Outside the municipalities of DARJEELING and KURSEONG, local affairs are controlled by the Deputy-Commissioner, in his capacity of administrator of the Darjeeling Improvement Fund. In the Kālimpong Government estate they are looked after by the manager, who works through the village headmen ; in the Kālimpong and Pedong bazars annual grants are made from the Improvement Fund, chiefly for the purposes of conservancy.

Police and jails. The District contains 4 police stations or *thānas* and 22 outposts, 4 being independent outposts and 14 patrol posts. In 1903 the force under the District Superintendent consisted of 4 inspectors, 20 sub-inspectors, 45 head constables, and 342 constables, making in all 411 men. In addition, the village watch consists of 177 *chaukidārs*, including 24 *daffadārs*. A District jail at Darjeeling has accommodation for 132 prisoners, and subsidiary jails at Kurseong and Siligūrī for 32.

Education. Owing largely to the work of the Church of Scotland Mission, education has made good progress during recent years, in spite of the difficulties of teaching a polyglot population scattered among the mountains. In 1901, 7 per cent. of the population (12 males and 1.4 females) could read and write. The total number of pupils under instruction increased from 3,255 in 1892-3 to 3,915 in 1900-1. In 1903-4, 3,731 boys and 515 girls were at school, being respectively 18.7 and 2.6 per cent. of those of school-going age. The proportion for boys is below the average for Bengal, but the percentage for girls ranks high. The chief educational institutions are St. Paul's School, St. Joseph's College, the Diocesan girls' school, and the Loretto Convent school at DARJEELING, the Victoria boys' school and the Dow Hill girls' school at KURSEONG, and St. Andrew's Colonial Homes at KĀLIM-

PONG. The total number of educational institutions, public and private, in 1903-4 was 178: namely, 6 secondary, 150 primary, and 22 special schools. The total expenditure on education was Rs. 52,000, of which Rs. 30,000 was met from Provincial funds, Rs. 1,600 from municipal funds, and Rs. 5,000 from fees.

The District is well provided with hospitals and dispensaries, which numbered 12 in 1903, of which 6 had accommodation for 192 in-patients. At these the cases of 45,000 out-patients and 1,600 in-patients were treated during the year, and 1,250 operations were performed. The percentage of patients treated to population far exceeded the results attained elsewhere in Bengal outside Calcutta. The expenditure was Rs. 64,000 and the income Rs. 73,000, of which Rs. 20,000 was derived from Government contributions and the same sum from Local funds, Rs. 11,000 from municipal funds, and Rs. 17,000 from subscriptions. These figures are exclusive of the Lowis Jubilee Sanitarium in Darjeeling, the railway dispensary at Tindhāria, and two other private dispensaries. Medical.

Vaccination is not compulsory except in Darjeeling and Kurseong towns. In 1903-4 the number of persons successfully vaccinated was 11,000, or 50 per 1,000 of the population. Vaccination.

[L. S. S. O'Malley, *District Gazetteer* (1907); Sasi Bhushan Datt, *Tarai Settlement Report* (Calcutta, 1898); C. A. Bell, *Settlement Report of Kālimpong Government Estate* (Calcutta, 1905).]

Darjeeling Subdivision.—Head-quarters subdivision of Darjeeling District, Bengal, lying between 26° 52' and 27° 13' N. and 87° 59' and 88° 53' E., with an area of 726 square miles. The subdivision consists entirely of lofty mountains and deep valleys, and large areas are covered with forests. It is divided into two portions by the Tista, the tract east of that river being almost entirely reserved for native cultivation where the land is not covered by forests, while in the tract to the west the cultivable land is mostly under tea. The population in 1901 was 133,386, compared with 105,672 in 1891, and was contained in one town, DARJEELING (population, 16,924), the head-quarters, and 181 villages. The density is 184 persons per square mile; but the Government estate of KĀLIMPONG, east of the Tista, is far more sparsely populated than the tract west of that river. There are cantonments at Darjeeling and LEBONG. Outside Darjeeling the most important market is in Kālimpong village.

Kurseong Subdivision.—Southern subdivision of Darjee-

ling District, Bengal, lying between $26^{\circ} 31'$ and $27^{\circ} 0'$ N. and $88^{\circ} 7'$ and $88^{\circ} 31'$ E., with an area of 438 square miles. The population in 1901 was 115,731, compared with 117,642 in 1891, and was contained in one town, KURSEONG, the headquarters, and 388 villages, the density being 264 persons per square mile. The subdivision contains two distinct tracts, the northern resembling the adjoining portion of the Darjeeling subdivision, and consisting of great mountain ridges and valleys, while the Siliguri *thāna* lies in the plains and is a level submontane strip of country. After Kurseong the most important places in the subdivision are SILIGURI, the junction of the northern section of the Eastern Bengal State and the Darjeeling-Himālayan Railways; TINDHĀRIA, where the workshops of the latter railway are situated; and the large marts of Mātigarā and Naksalbāri in the *tarai*.

Kālimpong (or Dālingkot).—A hilly tract in Darjeeling District, Bengal, lying between $26^{\circ} 51'$ and $27^{\circ} 12'$ N. and $88^{\circ} 28'$ and $88^{\circ} 53'$ E., with an area of 412 square miles. It is situated east of the Tista, west of the Ni-chu and Di-chu (Jaldhākā), and south of the State of Sikkim, and was acquired from Bhutān after the campaign of 1864–5. Of the total area, 213 square miles are occupied by 'reserved' forests and 10 square miles by four tea gardens, while 179 square miles are reserved for native cultivation; five-sixths of the inhabitants are settled on the *khās mahāls* or state lands. The country is cut up by ridges of varying height and steepness, separated by narrow valleys, the principal of which run back far into the mountains. These ridges debouch into the plains at elevations ranging from 300 feet to 1,000 feet above sea-level, rising in the interior to 10,500 feet at Rishi La. Over a large portion of the tract the 'reserved' forests cover the tops of the ridges and the bottoms of the valleys, while the cultivated area occupies the intervening space. The land above 5,000 feet is mostly, and that above 6,000 feet almost entirely, under 'reserved' forest, which also covers most of the area below 2,000 feet. The chief crop grown is maize, which occupies 38,000 acres, or more than three-fourths of the net cropped area. A new settlement of the land revenue was completed in 1903; the demand is Rs. 10,000 per annum, and Rs. 1,300 is realized from cesses. A poll tax was originally levied, which was gradually replaced by block rates, and these have in their turn given way to a differential classification and assessment of the lands within each block.

The land has been classified for revenue purposes as

cardamom, held rent free for the first three years, during which there is practically no out-turn, after which it is assessed at Rs. 10 per acre; terraced rice lands, paying from 8 annas to Rs. 1-4 per acre; untterraced cultivation, including fallows of less than three years' standing, paying 6 annas to 15 annas per acre; and fallows of three years' standing and over, paying from 2 to 3 annas per acre. Some lands in each of the last three classes are assessed at a slightly lower rate for the first few years of the settlement. The estate has been divided into 48 blocks, excluding Kālimpong bazar, each under a headman or *mandal*, who is responsible for the collection of rents, the repair of roads, and certain other duties, in return for which he receives a percentage on the collections and some other privileges. The total rental of the *khās mahāls* for 1903-4 was Rs. 31,000, and they are exempt from the payment of cesses. The chief village in the estate is KĀLIMPONG; and there are large bazars at Pedong on the Tibetan trade route, and at Sombāri at the end of the Chel valley, where the produce of the hill cultivators is sold to the cultivators of the Duārs. The forests and the colliery at Dāling are referred to in the article on DARJEELING DISTRICT. A new tract has been opened for cinchona cultivation at Munsang. Oranges are grown and exported to the Duārs and the *tarai*.

[C. A. Bell, *Settlement Report* (Calcutta, 1905).]

Darjeeling Town.—Head-quarters of Darjeeling District, Bengal, situated in 27° 3' N. and 88° 16' E., in the Lower Himālayas, 379 miles from Calcutta by rail. The name Darjeeling (*Rdorje-gling*) means 'the place of the *dorje*,' the mystic thunderbolt of the Lāmaist religion, and is connected with the cave on Observatory Hill, which was a sacred spot prior to the British occupation of the country, and above which once stood the monastery, since removed to a site lower down the hill. At the Census of 1901 the population of the town with the two cantonments of Darjeeling and Lebong was 16,924, of whom 10,271 were Hindus, 4,437 Buddhists, 1,132 Christians, and 1,049 Musalmāns. The number of inhabitants during the summer months is much greater, and at a special enumeration in September, 1900, the population was 23,852. Darjeeling was acquired by the British Government in 1835 as a sanitarium, and it soon became a favourite summer retreat for the officials of Lower Bengal and their families. It is now the summer head-quarters of the Lieutenant-Governor of Bengal, of the Conservator of Forests, Bengal, and also for a few months of the Commissioner of the Bhāgal-

pur Division ; a Superintending Engineer, Executive Engineer, and Deputy-Conservator of Forests are also stationed here.

The town occupies a long narrow ridge descending abruptly to the bed of the Great Rangit river. The highest and lowest points within municipal limits are about 7,800 feet and 6,000 feet respectively above sea-level. In 1872, before the construction of the railway, the population numbered only 3,157, but during the next nine years it increased by more than 100 per cent., and it doubled again between the years 1881 and 1891. Since 1891 its growth has been less rapid, as most of the available building sites have been already taken up and built upon. Moreover, the disastrous landslips of 1899 caused a temporary check to its development. These were caused by a violent cyclone with heavy rainfall, which visited the District in September, 1899. On the 23rd a heavy thunderstorm broke in Darjeeling about 1.30 p.m., and for three hours the rain descended in torrents. A lull ensued till about 8 o'clock, and then the cyclone burst in all its fury. The storm raged the whole of the night of the 23rd, and all the next day and night, without the slightest intermission till about 3.30 in the early morning of the 25th. No less than 5.3 inches of rain fell during the 24 hours ending at 8 o'clock on the morning of the 24th, and 19.4 inches before 4 a.m. of the following day. Most of the landslips occurred on the east of the town, where the hill-side is very precipitous. These overwhelmed many houses, and roads and pathways were broken away in many places by the constant stream of mud, water, and stones down the hill-sides. Seventy-two lives were lost. The town also suffered much damage in the great earthquake of 1897, when many houses were injured and a few were entirely wrecked ; three lives were lost by the fall of boulders from the hill-sides.

The local trade of Darjeeling is practically confined to supplying the wants of European inhabitants and of the tea plantations. A considerable traffic is carried on by the hill-men with residents and visitors in China cups, turquoise, coral and amber ornaments, jade and agate cups and beads, prayer wheels, bells, amulets and other curiosities illustrative of Buddhist monastic life, as well as *khukris*, Bhotiā and Lepchā knives, Nepālese brass-work, &c. The Darjeeling shopkeepers deal mostly in European piece-goods, stores, glass, hardware, and crockery.

The municipality was constituted in 1850, and at first coincided with the tract of 138 square miles ceded by the

Sikkim Rājā ; it is now restricted to the station itself, with the two cantonments of Darjeeling and Lebong, and is governed by (Bengal) Act I of 1900. The income during the decade ending 1901-2 averaged 2.19 lakhs, and the expenditure 1.72 lakhs. In 1903-4 the income was 3½ lakhs, including Rs. 48,000 from a tax on houses and lands, Rs. 19,000 from a water rate, Rs. 29,000 from a lighting rate, Rs. 23,000 from a conservancy rate, Rs. 42,000 as ground rents from leases of Government property within the town, and Rs. 9,000 as fees from the municipal market. In the same year the expenditure was 2½ lakhs, the chief items being Rs. 27,000 spent on lighting, Rs. 98,000 on water-supply, Rs. 47,000 on conservancy, Rs. 10,000 on medical relief, Rs. 14,000 on roads, Rs. 4,000 on buildings, Rs. 5,000 on drainage, and Rs. 1,000 on education. A loan of 16.5 lakhs has been obtained from Government for the improvement of the water-supply. An electric light installation was introduced in 1897, at a cost of 1.31 lakhs, which supplies the streets and some of the houses ; an additional grant of Rs. 10,000 was made from Provincial funds in 1903-4 towards the improvement of the installation.

The chief public buildings are the Shrubbery, the residence of the Lieutenant-Governor of Bengal, built in 1879 ; the Secretariat offices, built in 1898 ; the Eden Sanitarium, the Lowis Jubilee Sanitarium, St. Andrew's Church, the Wesleyan Chapel, the Scottish Kirk, the Roman Catholic Convent and Chapel, St. Paul's School, St. Joseph's College, and the barracks at Katāpahār, Jālāpahār, and Lebong. Two gardens, Lloyd's Botanical Gardens and the Victoria Pleasaunce, are open to the public.

The Darjeeling cantonment, which is above the town, comprises JĀLĀPAHĀR and Katāpahār. At Katāpahār are artillery barracks, which at present accommodate a battery of field artillery and a company of garrison artillery during the summer. Jālāpahār is a convalescent dépôt with accommodation for 400 men. The LEBONG cantonment below Darjeeling is occupied by a British infantry regiment. The head-quarters of the Northern Bengal Mounted Rifles are at Darjeeling ; the force consists of 6 companies, stationed at Kurseong, Jalpaiguri, Dām-Dim, Nāgrakot, Alipur-Duārs, and Purnea, 3 companies of cadets, and one reserve company. Its total strength (1903-4) is 510 of all ranks.

The District jail at Darjeeling has accommodation for 132 prisoners. The bakery, from which bread is supplied to the troops and to the general public, constitutes the chief industry ;

oil-pressing, bamboo and cane work, carpentry, boot- and shoemaking are also carried on, and bees are hived.

The chief educational institutions are St. Paul's School for the sons of Europeans and East Indians, established at Calcutta in 1845 and removed to Darjeeling in 1864 ; and St. Joseph's Roman Catholic College, founded at Sunny Bank in 1888 but transferred to the present buildings at North Point in 1892. In 1903-4 there were 213 pupils at St. Joseph's College and 96 at St. Paul's School. Other schools for European and Eurasian education are the Diocesan girls' school with 85 pupils, and the Loretto Convent school with 170 pupils. New buildings have recently been erected for the Diocesan girls' school which accommodate 100 pupils ; the present constitution of the school in its relation to the Clewer Sisterhood dates from 1895. The Darjeeling high school is open to all natives ; the students numbered 280 in 1901, of whom 49 were Bhotiās and 3 Lepchās. Bhotiās and Lepchās who do not intend to read for university examinations are educated free, and are trained chiefly as explorers, interpreters, and surveyors. Attached to the school is a boarding-house, with accommodation for 7 Bhotiās and Lepchās.

The most important medical institution is the Eden Jubilee Sanitarium, which was opened in 1883 and provides accommodation for 86 sick and convalescent persons ; it is self-supporting. A new hospital in connexion with it, built at a cost of Rs. 20,000 and opened in 1901, contains an excellent operating theatre of the most modern type and provides accommodation for six in-patients and two nurses. The Lewis Jubilee Sanitarium for natives, which was opened in 1887, contains accommodation for 99 persons ; the main building and the land were given by the Mahārājā of Cooch Behār. The town also contains a dispensary with 38 beds.

Jālāpahār.—Hill in the head-quarters subdivision of Darjeeling District, Bengal, situated in 27° 1' N. and 88° 16' E., above the station of Darjeeling. Jālāpahār, which forms part of Darjeeling cantonment, is a convalescent dépôt garrisoned by a company of the British infantry regiment quartered at LEBONG. Barracks were built at Jālāpahār as far back as 1848, but these have been enlarged and now provide accommodation for 400 men. The parade ground is 7,520 feet above sea-level.

Kālimpong Village.—Village in the head-quarters subdivision of Darjeeling District, Bengal, situated in 27° 4' N. and 88° 28' E., 3,933 feet above sea-level. Population (1901),

1,069. The village, which has given its name to the tract of hilly country formerly known as Dālingkot, is the established market for Tibetan wool and other exports, and contains a large bazar. The wool, which is brought in via the Jelep La from Tibet, is dispatched by carts along the Tista valley road to Siliguri on the Eastern Bengal State Railway. Since 1891 a fair has been held annually in November at Kālimpong, at which agricultural produce and stock are exhibited and prizes are given both in cash and in the form of English poultry and selected seed; this is the most successful agricultural show in Bengal, and is supported by subscriptions supplemented by a Government grant. More than 100 Tibetan mules are annually purchased here by Government for transport purposes at an average price of Rs. 150. A branch of the Church of Scotland Mission, established at Kālimpong, possesses a church, an Anglo-Hindī middle school with 4 masters and 55 pupils, and a hospital with 28 beds in connexion with the Government dispensary. The St. Andrew's Colonial Homes were instituted in 1900, under the auspices of the Church of Scotland, for the education of poor European and Eurasian children. The object of these homes is to give the children, in a healthy District and favourable environment, such a course of training as will fit them for emigration to the Colonies, or make them more robust for work in India. The scheme is managed by an independent committee, and the system adopted is that of cottage homes, each cottage holding 25 to 30 children. Originally 100 acres of land were granted by Government and an agricultural expert was appointed to superintend the outdoor work. The board of management have since obtained permission to acquire a tract of about 330 acres more and to hold it in the position of a ryot; of this, about 200 acres have already been acquired. The first cottage was opened in 1901, and three other cottages and a central school have since been added.

Kurseong Town (*Karsiāng*).—Head-quarters of the subdivision of the same name in Darjeeling District, Bengal, situated in 26° 53' N. and 88° 17' E., on the Lower Himālayas, 4,860 feet above sea-level, about 20 miles south of Darjeeling. Population (1901), 4,469. Kurseong is, like Darjeeling, a hill station, but does not enjoy the same reputation as a sanitarium. The town is situated on the Darjeeling-Himālayan Railway and is a centre of the tea trade. It was constituted a municipality in 1879. The income during the decade ending 1901-2 averaged Rs. 10,000, and the expenditure Rs. 9,600. In

1903-4 the income was Rs. 14,000, of which Rs. 9,000 was derived from a tax on houses and lands and Rs. 3,000 from a conservancy rate; the expenditure in the same year was also Rs. 14,000. Unfiltered water is supplied from a municipal reservoir, which is fed by springs. The town contains the usual public offices, including a sub-jail with accommodation for 24 prisoners, and a dispensary with 16 beds. The principal educational institutions are for the benefit of Europeans and Eurasians: namely, the Victoria boys' school founded in 1879, with 187 boys in 1903-4; and the Dow Hill girls' school founded in 1898, with 76 girls in 1903-4, both of which are aided by Government.

Lebong.—Cantonment in the head-quarters subdivision of Darjeeling District, Bengal, situated in $27^{\circ} 4' N.$ and $88^{\circ} 17' E.$, below the station of Darjeeling, at an altitude of 5,970 feet. Population (1901), 208. Barracks built in 1896 contain accommodation for about 450 men, but Government has purchased land on the Lebong spur with the intention of building sufficient barracks to accommodate a whole battalion of British infantry.

Phalūt.—One of the loftiest peaks in the Singālilā spur of the Himālayas, in the head-quarters subdivision of Darjeeling District, Bengal, with a height of 11,811 feet, situated in $27^{\circ} 13' N.$ and $88^{\circ} 3' E.$ The view of the great northern snowy mountains from this hill is one of indescribable grandeur. A jagged line of snow connecting the two highest known mountains in the world, Everest and Kinchinjunga, dazzles the eye; and, while the deep silence around impresses itself upon the spectator, the thick clumps of pine forest with their wide-spreading arms add a weird solemnity to the scene. The Nepāl frontier road passes by this hill, and there is a staging bungalow which is available to travellers on application to the Deputy-Commissioner of Darjeeling.

Sabargam.—One of the principal peaks in the Singālilā spur of the Himālayas, in the head-quarters subdivision of Darjeeling District, Bengal, situated on the western frontier of the District in $27^{\circ} 10' N.$ and $88^{\circ} 1' E.$ The height above sea-level is 11,636 feet.

Sandakphū.—One of the principal peaks in the Singālilā spur of the Himālayas, in the head-quarters subdivision of Darjeeling District, Bengal, situated in $27^{\circ} 6' N.$ and $88^{\circ} 0' E.$ The height above sea-level is 11,930 feet. It commands an unequalled view not only of the Sikkim snows, but also of the Nepāl mountains, including Everest. The

Nepāl frontier road runs over the hill, and there is a staging bungalow which is available to travellers on application to the Deputy-Commissioner of Darjeeling.

Siliguri.—Village in the Kurseong subdivision of Darjeeling District, Bengal, situated in $26^{\circ} 43' \text{ N.}$ and $88^{\circ} 26' \text{ E.}$, near the left bank of the Mahānandā. Population (1901), 784. Siliguri is the northern terminus of the Eastern Bengal State Railway, where it is joined by the Darjeeling-Himālayan Railway. It is also the terminus of the cart-road from Kālimpong and Sikkim, and it thus focuses the whole trade of Darjeeling, Sikkim, and Tibet. Several jute firms are established here, and, in addition to the permanent shops, there is a bi-weekly Government market. A Deputy-Magistrate is stationed at Siliguri. The sub-jail has accommodation for 8 prisoners, and the dispensary has 20 beds.

Tanglū.—One of the principal peaks in the Singālilā spur of the Himālayas, in the head-quarters subdivision of Darjeeling District, Bengal, situated in $27^{\circ} 2' \text{ N.}$ and $88^{\circ} 5' \text{ E.}$, at a height above sea-level of 10,074 feet. The Nepāl frontier road runs over the hill, and there is a staging bungalow for travellers, available on application to the Deputy-Commissioner of Darjeeling. The Little Rangīt river rises under this mountain.

Tindhāria.—Village in the Kurseong subdivision of Darjeeling District, Bengal, situated in $26^{\circ} 51' \text{ N.}$ and $88^{\circ} 20' \text{ E.}$, on the Darjeeling-Himālayan Railway, 2,748 feet above sea-level. The population consists almost entirely of the employés of the railway and their families. Tindhāria contains the railway workshops, employing 250 hands, and a railway hospital and club.

Santāl Parganas.—Southern District of the Bhāgalpur Division, Bengal, lying between $23^{\circ} 48'$ and $25^{\circ} 18' \text{ N.}$ and $86^{\circ} 28'$ and $87^{\circ} 57' \text{ E.}$, with an area of 5,470 square miles. It is bounded on the north by the Districts of Bhāgalpur and Purnea; on the east by Mālda, Murshidābād, and Bīrbhūm; on the south by Burdwan and Mānbhūm; and on the west by Hazāribāgh, Monghyr, and Bhāgalpur. Boundaries, configuration, and hill and river systems.

The general aspect of the District is undulating or hilly; to the north-east, however, it abuts on the Gangetic plain, and a narrow strip of alluvial land about 650 square miles in area thus falls within it. The RĀJMAHĀL HILLS, which cover 1,366 square miles, here rise steeply from the plain, but are nowhere higher than 2,000 feet above sea-level, their average elevation being considerably less. Among the highest ridges are Mori and Sendgārsā. The major portion of these hills

falls within the Dāman-i-koh Government estate, which has an area of 1,351 square miles. Among the highest ridges outside the Dāman-i-koh are the Nuni, Sānkarā, Rāmgār, Kulangā, Sarbar, Sundardihi, Lakshmanpur, and Sāpchala hills. East and south of these hilly tracts the country falls away in undulations, broken by isolated hills and ridges of gneiss of sharp and fantastic outline. The Ganges forms the northern and part of the eastern boundary, and all the rivers of the District eventually flow either into it or into the Bhāgrathi. The chief of these are the Gumāni, the Maral, the Bānsloi, the Brāhmanī, the Mor or Morākhi with its tributary the Naubil, the Ajay, and the Barākar. None of them is navigable throughout the year.

Geology. Archaean gneiss and Gondwāna rocks constitute the greater portion of the Santāl Parganas, the latter represented principally by the volcanic rocks of the Rājmahāl Hills, which occupy an elevated strip of land along the eastern border, while to the west the undulating area that constitutes the greater part of the District consists of 'Bengal gneiss,' which is remarkable for the great variety of crystalline rocks which it contains. The Gondwāna division consists of the Tālcher, Dāmodar, Dubrājpur, and Rājmahāl groups. The Tālcher and Dāmodar belong to the Lower Gondwānas, and the other two groups to the Upper. The volcanic rocks of the Rājmahāl group are the predominant member of the series, and they constitute the greatest portion of the hills of that name. They are basic lavas resembling those of the Deccan trap, and vary from a dolerite in their coarser types to a compact basalt in the finer-grained varieties. A trachytic intrusion situated in the Hurā coal-field, about 22 miles south-east of Colgong, although petrologically quite different from the basic basalts and dolerites, may nevertheless belong to the same volcanic series. Sedimentary beds, consisting principally of hard white shales, sometimes also of hard quartzose grits or carbonaceous black shales, occur frequently intercalated between successive flows; and these are of great interest on account of the beautifully preserved fossil plants which they contain. They are mostly cycadaceous plants together with some ferns and conifers, and are identical with those found in the Upper Gondwāna at Jubbulpore, in Cutch and various other places, and have been of great assistance to geologists in determining the age of the series. In the Rājmahāl Hills, the Gondwāna groups underlying the volcanic group are found principally along the western border of the range. The outcrops are very

discontinuous, owing partly to the faulted nature of the western boundary, and partly to the overlaps between the different members, which in the case of the Barākars, Dubrājpur, and Rājmahāl amount to a well-marked unconformity. The Tālchers are very poorly represented. They consist of the usual greenish silts and sandstones, with only a local development of the well-known boulder bed. These rocks are supposed to be of glacial origin. The next group is the most important from an economic point of view, as it contains the coal-measures. Along the western border of the hills, it constitutes several coal-fields, which, enumerated from north to south, are: the Hurā coal-field, a tract about 15 miles long from north to south, commencing about 13 miles south-east of Colgong; the Chuparbhīta coal-field, about 10 miles farther south in the valley of the Gumāni; the Pachwāra field, in the Bānsloi valley; and the Brāhmanī coal-field, in the valley of the river from which it is named. In the three southern fields the Dāmodar rocks are lithologically similar to the Barākar beds of the Rāniganj coal-field, consisting of alternations of grit, sandstone, and shale, with occasional beds of inferior coal. The coal-measures of the Hurā field are lithologically different; they consist of friable felspathic grits and soft white shales, with a few thick seams of inferior coal, and correspond possibly with the Rāniganj group of the Dāmodar coal-fields. The Dubrājpur group, which either intervenes between the Dāmodar and volcanic rocks or rests directly on the gneiss, to be overlapped in its turn by the volcanic rocks themselves, consists of coarse grits and conglomerates, often ferruginous, containing quartz and gneiss pebbles, with occasionally hard and dark ferruginous bands.

The south-western portion of the District contains the small Deogarh coal-fields and the northern edge of the Rāniganj coal-field. The Tālcher and Barākar are the groups represented. The boundaries of these coal-fields are often faulted. There are numerous dikes and intrusive masses of mica peridotite and augite dolerite, the underground representatives of the Rājmahāl flows. These intrusions occur in profusion in the surrounding gneiss. The coal in the Deogarh fields is neither plentiful nor of good quality. In the north of the District the rocks disappear beneath the Gangetic alluvium¹.

¹ *Memoirs, Geological Survey of India*, vols. vii and xiii, pt. ii, and *Records, Geological Survey of India*, vol. xxvii, pt. ii. The above account was contributed by Mr. E. Vredenburg, Deputy-Superintendent, Geological Survey of India.

Botany.

The narrower valleys are often terraced for rice cultivation, and the rice-fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is prominent. Throughout the District the principal tree is the *sāl* (*Shorea robusta*), but all trees characteristic of rough and rocky soil are found in the jungles. Such are the *palās* (*Butea frondosa*), *tūn* (*Cedrela Toona*), *āsan* (*Terminalia tomentosa*), *baherā* (*Terminalia Chebula*), *haritakī* (*Terminalia belerica*), *arjun* (*Terminalia Arjuna*), *Phyllanthus Emblica*, *jāmun* (*Eugenia Jambolana*), *babūl* (*Acacia arabica*), *khair* (*Acacia Catechu*), *mahuā* (*Bassia latifolia*), *bakul* (*Mimusops Elengi*), *Mallotus philippinensis*, *kāntāl* (*Artocarpus integrifolia*), *Artocarpus Lakoocha*, *Lagerstroemia parviflora*, *Anogeissus latifolia*, *gamhār* (*Gmelina arborea*), *kusum* (*Schleichera trijuga*), and *ābnūs* (*Diospyros melanoxylon*).

Fauna.

Outside the Government estates, where alone forest is protected, the jungle is being gradually destroyed and big game has almost disappeared. The last elephant was shot in 1893; a few bears, leopards, hyenas, and spotted deer survive, but the Santāl is as destructive of game as of jungle. Wild ducks, snipe, and quail abound in the alluvial tract. Partridges are also fairly common, and partridge taming is a favourite amusement of the Santāls. Peafowl and jungle-fowl are still to be found in the Dāman-i-koh and in the hills to the south and east of Dumkā.

Climate,
tempera-
ture, and
rainfall.

The alluvial strip of country above alluded to has the damp heat and moist soil characteristic of Bengal, while the undulating and hilly portions of the District are swept by the hot westerly winds of Bihār, and resemble in their rapid drainage and dry subsoil the lower plateau of Chotā Nāgpur. In this undulating country the winter months are very cool and the rains not oppressive, but the heat from the end of March to the middle of June is great. Mean temperature rises from 64° in December and January to 88° in April and May. The mean maximum is highest (100°) in April; but after May it drops rapidly, chiefly owing to the fall in night temperature, and from July to October remains almost constant at 88° and 89°. The mean minimum is lowest (51°) in December and January. The annual rainfall averages 52 inches, of which 8.8 inches fall in June, 13.2 in July, 11.4 in August, and 9.2 in September.

Owing to the completeness of the natural drainage and the custom of accumulating excess rain-water by dams, floods seldom cause much damage. The only destructive flood within recent years occurred on the night of September 23, 1899, in the north-west of the Goddā subdivision. The storm began in the afternoon, and by 8 a.m. next morning 10.1 inches of rain had been registered at Goddā. The natural water-courses were insufficient to carry away the water, and a disastrous inundation ensued. It was estimated that 881 lives were lost, while upwards of 6,000 cattle perished and 12,000 houses were destroyed. The villages in the submerged area were afterwards visited by a somewhat severe epidemic of cholera, probably due to the contamination of the water-supply. Natural calamities.

Until the formation of the District in 1855, the northern half formed part of Bhāgalpur, while the southern and western portions belonged to Bīrbhūm. The Rājmahāl Hills lay within Bhāgalpur close to the line of communication between Bengal and Bihār, and the Pahārias ('hillmen') who inhabited them lived by raiding and soon forced themselves on the attention of the East India Company. The Muhammadan rulers had attempted to confine the Pahārias within a ring fence by granting *zamīndāris* and *jāgīrs* for the maintenance of a local police to repel incursions into the plains; but little control was exercised, and in the political unrest of the middle of the eighteenth century these defensive arrangements broke down. Repressive measures were at first attempted with little effect, but between 1779 and 1784 Augustus Cleveland succeeded by gentler means in winning the confidence of the Pahārias and reducing them to order. He allotted stipends to the tribal headmen, established a corps of Hill Rangers recruited among the Pahārias, and founded special tribunals presided over by tribal chiefs; his rules were eventually incorporated in Regulation I of 1796. To pacify the country, Government had to take practical possession of the Pahāria hills to the exclusion of the *zamīndārs* who had previously been their nominal owners. The tract was therefore not dealt with at the Permanent Settlement; and finally in 1823 Government asserted its rights over the hills and the fringe of uncultivated country, the Dāman-i-koh or 'skirts of the hills,' lying at their feet. An officer was appointed to demarcate the limits of the Government possessions, and the rights of the *jāgīrdārs* over the central valley of Mānjhuā were finally resumed in 1837. A Superintendent of the Dāman was

appointed in 1835; and he encouraged the Santāls, who had begun to enter the country about 1820, to clear the jungle and bring the valleys under cultivation. The Pahārias, pacified and in receipt of stipends from Government, clung to the tops and slopes of the hills, where they practised shifting cultivation. The valleys offered a virgin jungle to the axes of the Santāls who swarmed in from Hazāribāgh and Mānbhūm. On the heels of the Santāls came the Bihāri and the Bengali *mahājans* (money-lenders). The Santāl was simple and improvident, the *mahājan* extortionate. The Santāls found the lands which they had recently reclaimed passing into the hands of others owing to the action of law courts; and in 1855, starting with the desire to revenge themselves on the Hindu money-lenders, they found themselves arrayed in arms against the British Government. The insurrection was not repressed without bloodshed, but on its conclusion a careful inquiry was held into the grievances of the Santāls and a new form of administration was introduced. Regulation XXXVII of 1855 removed the area of the present District from the operation of the general Regulations and placed the administration in the hands of special officers under the control of the Lieutenant-Governor. The jurisdiction of the ordinary courts was suspended, and the regular police were removed. Five districts (collectively named the Santāl Parganas) were formed and placed under the control of a Deputy and four Assistant Commissioners, each of whom had a sub-assistant and was posted with his sub-assistant at a central point of his district. These ten officers were intended simply for the purpose of doing justice to the common people, and tried civil and criminal cases and did police work; revenue work and the trial of civil suits valued above Rs. 1,000 were carried on by the District staff of Bīrbhūm and Bhāgalpur.

Under this system the Deputy-Commissioner lived at Bhāgalpur, and of the officers left in the districts, three were on the loop and three on the chord line of rail, while only two were posted in the important districts of Dumkā and Goddā, which contained nearly half the population of the Parganas. In course of time, however, the Santāl Parganas were more or less brought under the ordinary law and procedure of the 'regulation' Districts, and the Deputy-Commissioner was practically transformed into a Judge. Accordingly, when in 1872 an agitation again began among the Santāls, directed chiefly against the oppression of the *zamīndārs*, and attended by acts of violence, it was felt that this tract required a

simpler form of administration than other parts of Bengal, and a special Regulation (III of 1872) was passed for the peace and good government of the Santāl Parganas. Under its provisions, a revenue 'non-regulation' District was formed; the Deputy-Commissioner was appointed to be the District officer, with head-quarters at Dumkā instead of Bhāgalpur, and the three tracts of Deogarh, Rājmahāl, and Goddā were reduced to the status of subdivisions. The areas now composing the subdivisions of Pākaur and Jāmtāra were at the same time attached as outposts to Dumkā, and that part of the police district of Deogarh which is included in the Jāmtāra subdivision and in the Tasariā and Gumro *tāluks* was withdrawn from the jurisdiction of the regular police and included in the non-police area. These changes completed the autonomy of the District.

Population increased from 1,259,185 in 1872 to 1,567,966 The in 1881, 1,753,775 in 1891, and 1,809,737 in 1901: the in- people. creases in 1881 and 1891 were largely due to greater accuracy in enumeration. The District is on the whole healthy, but malarial fever prevails in the low-lying country bordering on the Ganges, and also in parts of the hills.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write
		Towns.	Villages.				
Deogarh . .	952	2	2,368	297,403	312	+ 4.7	10,788
Goddā . .	967	...	1,274	390,323	404	+ 1.4	7,704
Pākaur . .	683	...	1,055	238,648	349	+ 3.6	3,747
Rājmahāl . .	741	1	1,292	276,703	373	+ 0.1	5,559
Dumkā . .	1,429	...	2,105	416,861	292	+ 3.1	11,020
Jāmtāra . .	698	...	1,073	189,799	272	+ 9.2	5,698
District total	5,470	3	9,167	1,809,737	331	+ 3.2	44,516

The three towns are MADHUPUR, DEOGARH, and SĀHIBGANJ; DUMKĀ, the District head-quarters, was constituted a municipality in 1903. The population is most dense in the low and level country on the north-east and north-west; the Dāman-i-koh in the centre of the District is a typical part of Chotā Nāgpur and is sparsely inhabited, and the population is stationary or decadent, except in the Rājmahāl subdivision, where the collection of *sabai* grass (*Ischoemum angustifolium*) for the paper-mills gives profitable employment. Elsewhere

emigration has been busily at work, especially among the Santāls, who chafe under the restrictions imposed by the Forest department on the indiscriminate felling of timber. Outside the Dāman-i-koh the only tracts that show a decline are Rājmahāl, Sāhibganj, and Poreyā. In the tract first mentioned the decrease is due to migration across the Ganges, while in Sāhibganj it is attributed to an outbreak of plague at the time of the Census. Poreyā is a poor and barren tract and, like the Dāman-i-koh, has lost by emigration. The smallness of the net increase for the whole District during the decade ending 1901 is due to the large scale on which emigration is taking place. It is, in fact, estimated that about 182,000 persons must have left the District during that period, and that the natural increase of the population was at least 10 per cent. The most striking features of the migration are : firstly, its great volume ; and secondly, the strong tendency of the people to move eastwards. There is a large influx from all the adjoining Districts west of a line drawn approximately north and south through the centre of the District, i.e. from Bhāgalpur, Monghyr, Hazāribāgh, and Mānbhūm ; but the movement is still stronger in the direction of the Districts east of this line, i.e. Purnea, Mālda, Murshidābād, Bīrbhūm, and Burdwān. The immigrants from the west exceed 83,000, while the emigrants to the east number close on 117,000. The great migration of the Santāls to this District from the south and west took place during the middle part of the nineteenth century, and many of the immigrants enumerated in the last Census are probably the survivors of those who took part in the movement. The tribe is still spreading east and north ; and the full effect of the movement is not exhausted in the Districts that adjoin the Santāl Parganas, but makes itself felt even farther away in those parts of Dinājpur, Rājshāhi, and Bogra which share with Mālda the elevated tract of quasi-laterite known as the Bāring. Of emigration to more distant places the most noticeable feature is the exodus to the Assam tea gardens, where more than 31,000 natives of this District were enumerated in 1901, and to Jalpaiguri, where they numbered more than 10,000. A large variety of dialects are used in the District. Bengali, spoken by 13.5 per cent. of the population, includes the Rārhi *bolī*, or classical Western Bengali, and Mālpahāria or the broken Bengali spoken by converted aborigines in the centre of the District. Bihārī is spoken by 46 per cent. ; the main dialect is Maithilī, which includes a sub-dialect known as Chhikā Chikki *bolī*, but

a dialect of Māgadhī, which has been affected by its contact with Bengali, is also largely used ; this is called by Dr. Grierson Eastern Māgadhī, and is locally known as Kārmālī or Khottā or even as Khottā Bangalā. Santālī itself, which is spoken by 649,000 persons, is a dialect of the Mundā family, while Malto belongs to the Dravidian group. Hindus constitute 56·1 per cent. of the total population, Animists 34·9 per cent., and Muhammadans 8·4 per cent.

The Santāls are now the distinctive caste of the District, and in 1901 numbered 663,000, of whom 74,000 were returned as Hindus and 589,000 as Animists. They are a typical race of aboriginal stock, and are akin to the Bhumijis, Hos, and Mundās. Their complexion varies from very dark brown to an almost charcoal black, and their features are negritic. The original habitat of the race is not known, but there is no doubt that from a comparatively remote period they have been settled on the Hazāribāgh table-land ; and it is noticeable that the Dāmodar river, by which its southern face is drained, is the terrestrial object most venerated by them. Within the last few centuries they have worked eastwards, and are numerous in the eastern half of the Chotā Nāgpur plateau and in Midnapore ; and, as has been already related, they are now emigrating to North Bengal and Assam. They worship various deities, of which the chief is the *Marang Buru*, who is credited with far-reaching power, in virtue of which he associates both with the gods and with demons. Each Santāl family has also two special gods of its own, the *Orak bonga* or household god and the *Ajebonga* or secret god. Their principal festival is the *Sohrai* or harvest festival, celebrated after the chief rice crop of the year has been dreaed. Public sacrifices of fowls are offered by the priest in the sacred grove ; pigs, goats, and fowls are sacrificed by private families, and a general saturnalia of drunkenness and sexual licence prevails. Chastity is in abeyance for the time, and all unmarried persons may indulge in promiscuous intercourse. Next in importance is the *Bahapūjā*, held in Phālgun (February–March) when the *sāl* tree comes into flower. Tribal and family sacrifices are held, many victims are slain and eaten by the worshippers, every one entertains his friends, and dancing goes on day and night.

The communal organization of the Santāls is singularly complete. The whole number of villages comprising a local settlement of the tribe is divided into certain large groups, each under the superintendence of a *parganait* or circle head-

Castes and
occupa-
tions.
The
Santāls.

man. This official is the head of the social system of the inhabitants of his circle; his permission has to be obtained for every marriage, and, in consultation with a *pañchāyat* of village headmen, he expels or fines persons who infringe the tribal standard of propriety. He is remunerated by a commission on the fines levied, and by a tribute in kind of one leg of the goat or animal cooked at the dinner which the culprits are obliged to give. Each village has, or is supposed to have, an establishment of officials holding rent-free land. The chief of these is the *mānjhi* or headman, who is usually also *ijāradār* where the village is held on lease under a *zamindār*; he collects rents, and allots land among the ryots, being paid for this by the proceeds of the *mān* land which he holds free of rent. He receives R. 1 at each wedding, giving in return a full bowl of rice-beer. The *prāmānik*, or assistant headman, also holds some *mān* land. The *jog-mānjhi* and the *jog-prāmānik* are executive officers of the *mānjhi* and the *prāmānik*, who, as the Santāls describe it, 'sit and give orders' which the *jog-mānjhi* and *jog-prāmānik* carry out. The *naiki* is the village priest of the aboriginal deities, and the *kudam naiki* is the assistant priest, whose peculiar function it is to propitiate the spirits (*bhūts*) of the hills and jungles by scratching his arms till they bleed, mixing the blood with rice, and placing it in spots frequented by the *bhūts*. The *gorait* or village messenger holds *mān* land and acts as peon to the headman, and is also to some extent a servant of the *zamindār*. His chief duty within the village is to bring to the *mānjhi* and *prāmānik* any ryot they want. Girls are married as adults mostly to men of their own choice. Sexual intercourse before marriage is tacitly recognized, it being understood that if the girl becomes pregnant the young man is bound to marry her. Should he attempt to evade this obligation, he is severely beaten by the *jog-mānjhi*, and, in addition to this, his father is required to pay a heavy fine.

Other castes are Bhuiyās (119,000), identified by Mr. Oldham with the Māls, whom in many respects they closely resemble; Musahars (28,000), whom Mr. Risley considers to be akin to the Bhuiyās; Māle Sauriā Pahāriās (47,000) and Māl Pahāriās (26,000), two Dravidian tribes of the Rājmahāl Hills, the former of whom are closely akin to the Oraons. The Muhammadans are chiefly Shaikhs (77,000) and Jolāhās (63,000). Agriculture supports 81 per cent. of the population, industries 7 per cent., commerce 0.6 per cent., and the professions 0.8 per cent.

Christians number 9,875, of whom 9,463 are natives, including 7,064 Santāls. The largest numbers are to be found in the head-quarters subdivision, where the Scandinavian Lutheran Mission, called the Indian Home Mission, has been at work for over forty years and maintains 29 mission stations and 9 schools, it has also a colony in Assam, where it owns a tea garden. The Church Missionary Society, which works in the Goddā and Rājmahāl subdivisions, has similarly established an emigration colony for its converts in the Western Duārs. Several Baptist missionaries work in the Jāmtāra subdivision, one of whom has established two branches of his mission in the head-quarters subdivision. Other missions are the Christian Women's Board of Missions and the Methodist Episcopal Mission, the latter of which works chiefly among Hindus and Muhammadans; it maintains a boarding-school, with an industrial branch in which boys and girls are taught poultry-keeping, gardening, fruit-farming, and carpentry.

The soil varies with the nature of the surrounding hills: where basalt or felspar or red gneiss prevails, the soil is rich; but where the hills are of grey gneiss or of granite in which quartz prevails, it is comparatively barren. The productiveness of the land is mainly dependent on its situation and its capability of retaining moisture. Where the surface is level and capable of retaining water coming from a higher elevation, it is not affected even by shortness or early cessation of rainfall, and good crops of rice are obtained. If, however, the slope is too steep, the rush of water often brings with it drifts of sand, which spoil the fields for rice cultivation and damage the growing crops. In the alluvial tract the system of cultivation differs in no way from that in vogue throughout the plains of Bihār. On the hill-sides level terraces are cut for rice cultivation, and these are flooded as soon as possible after the rains set in, small banks being left round the edge of each plot to hold in the water. Shifting cultivation is now restricted to the Sauriās of the hills in the Rājmahāl and Goddā subdivisions, and to certain defined areas in Pākaur. Land under cultivation is divided into two main classes, *bāri* or high land forming about 53 per cent. of the cultivated area, and *jamīn* or rice-fields the rest. The former, being uneven and wanting in organic matter, is ordinarily ill-suited for cultivation; but in the immediate vicinity of villages, where the surface is fairly level and rich in organic matter, *bāri* land produces valuable crops such as maize, mustard, the larger variety of cotton (*barkāpās*), tobacco, castor, and *brinjāls* and other vegetables.

Chief agricultural statistics and principal crops. The chief agricultural statistics for 1903-4 are shown below, in square miles.—

Subdivision.	Total	Cultivated	Cultivable waste	Forests
Deogarh . .	95 ²	366	282	..
Goddā . .	967	347	208	68
Pākaur . .	683	412	69	125
Rājmahāl . .	74 ¹	501	43	113
Dumkā . .	1,429	380	528	129
Jāmtāra .	698	155	202	..
Total	5,470	2,161	1,332	435

Rice, which covers 1,213 square miles, forms the staple food-grain, winter rice being the principal crop. It is largely grown in the alluvial strip along the eastern boundary and the lower slopes of the ridges; the undulating parts of the District, as well as the swampy ground between these ridges, are also sown with rice. Among the other crops are maize (262 square miles), various pulses (437 square miles), oilseeds (360 square miles), millets, wheat and barley, sugar-cane, and cotton. Indigo was grown till recently on a small scale, but its cultivation is now extinct.

Improvements in agricultural practice.

Settlement figures show that within twenty years cultivation has extended by about 30 per cent. in the Dāman-i-koh and by about 60 per cent. in the rest of the District. There is much waste land still available for cultivation, and rents are light. For several years past efforts have been made to stimulate the improvement of means of irrigation by loans under the Land Improvement Loans Act, and in 1901-2 Rs. 12,000 was thus advanced. Rs. 15,000 was also advanced under the Agriculturists' Loans Act at the close of the famine of 1896-7, and Rs. 6,000 in consequence of the disastrous floods of 1899-1900.

Cattle.

There is scarcity of fodder in the dry months, and the cattle are generally poor; animals of a better quality are, however, found in the Goddā subdivision, and good milking cattle are imported from Bhāgalpur. Pigs are largely kept for food by Santāls, Pahāriās, and low-caste Hindus.

Irrigation.

Besides the methods of supplying water to the rice crop which have been already described, the system of irrigation as practised in the Goddā subdivision consists in the construction of water channels leading from reservoirs made by throwing embankments across streams. These channels frequently pass through several villages, each village assisting in their construction and sharing in the benefits derived from

a network of distributaries. There is but little irrigation from wells; *kachchā* wells are sometimes dug for only one season to irrigate the sugar-cane crop from February to May, and tobacco is also grown in small patches by the aid of well-water.

At the beginning of the nineteenth century the District was ^{Forests} mostly covered with jungle. About 1820 the Santāls began to flock into it and betook themselves to the congenial occupation of jungle clearing; while the construction of the loop railway in 1854 and of the chord-line in 1866 hastened the process. In 1875 Government instituted inquiries with a view to bringing under scientific management the Government forests in the Dāman-i-koh, and in 1876 an area of 35 square miles was set aside for special reservation. This area was formally constituted a 'reserved' forest, and the forest lands in the southern half of the Dāman-i-koh were constituted 'open' forests, the management being left in the hands of the Deputy-Commissioner. In 1894 all Government land which had not been settled with cultivators was constituted 'protected' forest under the Indian Forest Act (VII of 1878), and in 1895 the forests were placed in charge of the Forest department. The departmental system of management was, however, found not to be sufficiently elastic; and in December, 1900, the forests in the Rājmaḥāl subdivision and part of those in the Goddā subdivision were restored to the control of the Deputy-Commissioner. The hills in this tract are inhabited by Māle Sauriā Pahāriās, who are allowed the right of shifting cultivation, which renders scientific forestry impossible.

The chief tree is the *sāl* (*Shorea robusta*), and its distribution is general throughout the District, except where the forest has been destroyed, as is largely the case in the north of the Dāman-i-koh, by shifting cultivation and the cultivation of *sabai* grass. In the plains and valleys the forest is usually of pure *sāl*, the other principal trees being *piār* (*Buchanania latifolia*), *Semecarpus anacardium*, and *āsan* (*Terminalia tomentosa*). On the lower slopes of the hills other species appear in considerable variety; among these are *Zizyphus xylopyra*, *Anogeissus latifolia*, *Diospyros*, *Stereospermum*, and *Bauhinia*. As the hills are ascended, different species are met with, such as bamboos (*Dendrocalamus strictus*), *bījāsāl* (*Pterocarpus Marsupium*), *sitsāl* (*Dalbergia latifolia*), *gamhār* (*Gmelina arborea*), *Kydia calycina*, and *Grewia tiliacifolia*, the proportion of *sāl* gradually getting less, till on the upper plateau it also disappears, and on the old cleared lands gives place to a dense growth of shrubby trees, chief among which are *Nyctanthes Arbor-tristis*, *Wend-*

landia, *Gardenia*, *Flacourtia*, *Woodfordia*, and *Anogeissus*. At present most of the *sāl* trees are mere shoots from stumps 2 to 3 feet high, which, when they grow to a large size, are always unsound at the base. Cultivating tenants of Government are allowed to remove free of charge all timber of the unreserved species and such minor products as are required for their domestic consumption.

The area under the Forest department is 292 square miles; and in 1903-4 the revenue under its control was Rs. 42,000. Besides this, 143 square miles are managed by the Deputy-Commissioner. The chief sources of revenue are timber, bamboos, and *sabai* grass, while minor items are fuel, coal, stone, and *tasar* silk cocoons. Other jungle products are lac, found on the *palās* (*Butea frondosa*), *ber* (*Zizyphus Jujuba*), and *pīpal* (*Ficus religiosa*) trees; beeswax, catechu, honey, *konjtu* and *jombār* (two creepers used for making rope), and also a variety of edible products. The use of jungle products as a means of subsistence is confined for the most part to Pahāriās, Santālās, and Bhuiyās.

Minerals.

Stone is quarried on the hills bordering the loop-line of the East Indian Railway from Murarai to Sāhibganj; the stone quarried is for the most part supplied as ballast to the railway, the Calcutta municipality, and certain District boards. In 1903 coal-mines were worked at Bhālkī, Domanpur, Ghāthchorā, and Sārsābād in the Dumkā subdivision, and at Sultānpur and Palāsthōl mines in the Jāmtāra subdivision. The average daily number of persons employed was 79, and the output of coal was 2,361 tons. The Jāmtāra mines, which lie in the Dāmodar coal-field, produce good coal, but are worked only on a small scale for want of access to the railway; elsewhere the coal is limited in extent and inferior in quality, and is generally fit only for brick-burning. Hand labour is employed as a rule in digging out the coal, the wages paid being Rs. 1-4 to Rs. 1-8 per 100 cubic feet of coal lifted. Copper ores exist at Beherakī in the Deogarh subdivision, and lead ores (principally argentiferous galena) occur in the Sānkārā hills and at Turipahār, Beherakī, and Pānchpahār. At Beherakī 29 oz. 8 dwt. of silver have been obtained per ton of lead, and at Lakshmīpur near Nayā Dumkā 50 oz. 3 grs. of silver per ton of lead. A considerable area, especially in the Rājmahāl Hills, is occupied by laterite, often constituting an excellent iron ore. Siliceous white clays belonging to the coal-measures at Lohandia in the Hurā coal-field are suitable for pottery.

The arts and manufactures are of a primitive character

and of little importance. The manufacture of mattocks, picks, ^{Arts and} ploughs, hooks, knives, axes, spears, arrows, and shields is ^{manufac-} carried on as a village industry. The iron was formerly smelted ^{tures.} from native ore by Kol settlers; but with the destruction of jungle and the greater facility that now exists for obtaining old scrap-iron cheap from Deogarh and Rāmpur Hāt, the Marayeahs or blacksmiths of the District no longer use locally smelted iron or steel. *Bais* or measuring cups of a pretty though stereotyped pattern are made on a limited scale by Thatheris and Jādapetiās (braziers). Mochis and Chamārs carry on a fairly extensive industry in tanning leather and making shoes; Doms, Hāris, and Santāls cure skins for exportation; Mahlis make baskets, bamboo mats, and screens; Tātwas and Jolāhās weave coarse cotton cloths; and Kumhārs make tiles, pots, and pans. The manufacture of *ghī*, oil (*ma-huā*, *sarguja*, and mustard), and *gur* or coarse sugar is carried on as a domestic industry. *Tasar* cocoons are grown throughout the District, and spinning and weaving are also carried on. The lac insect is reared on *palās* trees on a fairly large scale; a Mārwarī at Dumkā manufactures about 700 maunds of shellac per annum for export, and there are other factories in the neighbourhood of Dumkā and at Pākaur, while lacquered bangles are manufactured at Nūnihāt and a few other places. Village carpenters are numerous, and wood-carving is carried on to a very small extent. Silver and pewter ornaments are also made. Indigo was till recently manufactured in a few European and native factories, but the industry is now extinct. Brick-making on European methods has been carried on at Mahārājpur for the last few years.

The chief imports are rice, gunny-bags, raw cotton, sugar ^{Commerce.} refined and unrefined, molasses, European and Bombay piece-goods, salt, kerosene oil, coal and coke. The chief exports are food-grains, linseed and mustard seed, *sabai* grass, road-metal, hides, raw fibres, and tobacco. Trade is carried on at markets, and is almost exclusively in the hands of traders from Bihār and Mārwarī merchants. The principal entrepôt is Sāhibganj. About 200,000 maunds of *sabai* grass are exported to the paper-mills near Calcutta, the approximate value of the export being 4 lakhs. Road-metal is exported chiefly to Calcutta, Hooghly, and Burdwān. The trade in hides is mainly carried on in the head-quarters and Pākaur subdivisions.

The District is traversed on the east by the loop-line and on ^{Railways} the west by the chord-line of the East Indian Railway. The ^{and roads.} Girīdh branch leaves the chord-line at Madhupur within the

District, and there is also a short branch connecting Rājmaḥāl on the Ganges with the loop-line. A small branch line from Baidyanāth junction to Deogarh is worked by a private company. The construction of a line from Bhāgalpur to Hansdiha by a private syndicate was sanctioned, but the concession lapsed before the necessary capital was raised. There are also projects for the construction of lines from Bhāgalpur to Deogarh, from Ahmadpur to Baidyanāth, and from Mangalpur via Sūri to Dumkā. The District possesses good roads by which its produce is carted to the railway; 848½ miles being maintained by the District road committee, in addition to village roads and roads in Government estates. The chief roads are the Bhāgalpur-Sūri road passing through Dumkā, the Sūri-Monghyr road passing through Deogarh, the roads from Dumkā to Rāmpur Hāt and to the different subdivisional head-quarters, the road from Murshidābād along the Ganges through Rājmaḥāl and Sāhibganj to Bhāgalpur, as well as several connecting cross-roads and feeder-roads to the railway stations. The Ganges, which skirts the north-east of the District, forms an important channel of communication, but the other streams are of no commercial importance.

Famine.

The District has thrice suffered from famine within the last fifty years. On occasions of scarcity the *mahuā* and the mango trees afford food for large numbers; but in 1865-6, when there was great scarcity and distress, the people were compelled by hunger to eat the mangoes while still unripe, and thousands of deaths from cholera resulted. In 1874 relief was afforded by Government on a lavish scale, the fruit was allowed to ripen before being plucked, and there was no outbreak of disease. In 1896-7 part of the Jāmtāra subdivision and the whole of the Deogarh subdivision were declared affected. Relief works were opened in Jāmtāra and in Deogarh; but the highest average daily attendance in Jāmtāra was only 3,258, in the third week of May, 1897, and in Deogarh 1,647, towards the end of June. The works were finally closed on August 15, after an expenditure of Rs. 29,000 on works and Rs. 25,000 on gratuitous relief.

District
subdivi-
sions and
staff.

For administrative purposes the District is divided into six subdivisions, with head-quarters at DUMKĀ, DEOGARH, GODDĀ, RĀJMAHĀL, PĀKAUR, and JĀMTĀRA. A Joint-Magistrate or Deputy-Magistrate-Collector is usually in charge of the Rājmaḥāl subdivision, and a Deputy-Magistrate-Collector of each of the other subdivisions; in addition, three Deputy-Magistrate-Collectors and a Sub-Deputy-Magistrate-Collector are

stationed at Dumkā, one Deputy-Magistrate-Collector and one Sub-Deputy-Magistrate-Collector at Rajmahāl, Deogarh, and Goddā, and one Sub-Deputy-Magistrate-Collector at Jāmtāra and Pākaur. These officers have civil and criminal jurisdiction as detailed in the following paragraph. The Deputy-Commissioner is vested *ex officio* with the powers of a Settlement officer under the Santāl Parganas Regulation III of 1872, and is also Conservator of forests. An Assistant Conservator of forests is stationed in the District.

The civil and criminal courts are constituted under Regulation V of 1893, as amended by Regulation III of 1899. The Sessions Judge of Birbhūm is Sessions Judge of the Santāl Parganas and holds his court at Dumkā. Appeals against his decisions lie to the High Court of Calcutta. The Deputy-Commissioner exercises powers under section 34 of the Criminal Procedure Code and also hears appeals from all Deputy-Magistrates. In all criminal matters, except in regard to cases committed to the Court of Sessions and proceedings against European British subjects, the Commissioner of Bhāgalpur exercises the powers of a High Court. Suits of a value exceeding Rs. 1,000 are tried by the Deputy-Commissioner as District Judge, or by subdivisional officers vested with powers as Subordinate Judges. These courts are established under Act XII of 1887, and are subordinate to the High Court of Calcutta. Suits valued at less than Rs. 500 are tried by Deputy- and Sub-Deputy-Collectors sitting as courts under Act XXXVII of 1855, an appeal lying to the subdivisional officer. That officer can try all suits cognizable by courts established under Act XXXVII of 1855, and an appeal against his decision lies to the Deputy-Commissioner. There is no second appeal where the appellate court has upheld the original decree; if, however, the decree has been reversed, a second appeal lies to the Commissioner of the Division. The Deputy-Commissioner and Commissioner have powers of revision. These courts follow a special procedure, thirty-eight simple rules replacing the Code of Civil Procedure. A decree is barred after three years; imprisonment for debt is not allowed; compound interest may not be decreed, nor may interest be decreed to an amount exceeding the principal debt. When any area is brought under settlement, the jurisdiction of the courts under Act XII of 1887 is ousted in regard to all suits connected with land, and such suits are tried by the Settlement officer and his assistants or by the courts established under Act XXXVII of 1855; the findings of a Settlement

Civil and
criminal
justice.

court have the force of a decree. The District is peaceful, and riots are almost unknown. Persons suspected of witchcraft are sometimes murdered; cattle-theft is perhaps the most common form of serious crime.

Land
revenue

The current land revenue demand in 1903-4 was 3.84 lakhs, of which 1.16 lakhs was payable by 449 permanently settled estates, Rs. 1,600 by 5 temporarily settled estates, and 2.66 lakhs by 9 estates held under direct management by Government. Of the latter class, the DĀMAN-I-KOH is the most important.

Under Regulation III of 1872 a Settlement officer made a settlement of the whole District between the years 1873 and 1879, defining and recording the rights and duties of landlord and tenants, and where necessary fixing fair rents. One of the results of this settlement was to preserve the Santāl village communal system, under which the village community as a whole holds the village lands and has collective rights over the village waste; these rights, which have failed to secure recognition elsewhere in Bengal, were recorded and saved from encroachment. As regards villages not held by a community, the custom prevailed of leasing them to *mustājirs*, a system which led to great abuses, and there was also a tendency for the *zamīndār* to treat the Santāl *māñhi* as though he were but a lessee or *mustājir*. By the police rules of 1856 a *mandal* or headman was elected for each village where the *zamīndār's mustājir* was not approved by the Magistrate and villagers, his duties consisting of the free performance of police and other public duties. As, however, it was unsatisfactory to have two heads to a village, the *zamīndār's mustājir* and the ryots' *mandal* gradually merged into one, with the result that a *mustājir*, when appointed, had to secure the approval of the Magistrate, *zamīndārs*, and villagers. The position of the headman thus developed was defined at the settlement: he has duties towards the *zamīndār*, the ryots, and the Magistrate; he may be dismissed by the last-named personage on his own motion or on the complaint of the *zamīndār* or ryots; and the stability of tenure secured by Regulation III of 1872 prevents the *zamīndār* from ousting him. The rights of a headman are not usually transferable, but in the Deogarh subdivision some headmen known as *mul-ryots* are allowed to sell their interest in a village. In 1887 Government passed orders to prevent the sale of ryots' holdings being recognized by the courts in areas in which no custom of sale had been proved. In 1888 the revision of the settlement of 1873-9 in certain

estates was undertaken, and the work is being gradually extended throughout the District.

Prominent among the unusual tenures of the District are the *ghāt-wālis* of *tappā* Sarath Deogarh, which cover almost the whole Deogarh subdivision and are also found in Jāmtāra and Dumkā. These are police tenures, originally established by the Muhammadan government to protect the frontier of Bengal against the Marāthās.

Cultivable land is divided generally into five classes: three kinds of *dhāni* or rice land, and two kinds of *bāri* or high land. *Dhāni* lands are classified according to the degree by which they are protected from drought, and the average rates or rent may be said to be for the first class Rs. 3, for the second Rs. 2, and for the third R. 1. First-class *bāri* land is the well-manured land near the homesteads, averaging R. 1; while second-class *bāri* lands include the remainder of the cultivation on the dry uplands, and average 4 annas. Rates vary widely and the averages are only an approximation. In the recent settlement, the average rent for *dhāni* land over 600 acres of typical *samīndāri* country was Rs. 1-11 per acre, and for *bāri* land 6 annas, and the corresponding figures for the Dāman-i-koh were Rs. 1-9 and R. 0-5-4. Ryots have, however, been allowed abatements in the settlement actually concluded, and the settled rents do not average more than Rs. 1-8 an acre for *dhāni* lands, and 8 annas for *bāri* land. In the Dāman-i-koh the average holding of a cultivator is $9\frac{1}{2}$ acres, of which $4\frac{1}{2}$ acres are *dhāni* land; the total average rent rate is Rs. 8-14, but the average rent settled is only Rs. 6-1 per holding. In private settled estates the rents payable are somewhat higher.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	2,43	2,90	2,88	3,87
Total revenue . . .	4,70	5,63	6,80	8,87

Until 1901 the roads were managed by a Government grant administered by the Deputy-Commissioner; but in that year the Cess Act was introduced and a road cess committee was constituted, with the Deputy-Commissioner as chairman, which maintains the roads outside the municipal areas of Dumkā, Deogarh, and Sāhibganj. Local self-government.

- Public works. The drainage of a marsh near Rājmahāl was undertaken in 1898 under the provisions of the Drainage Act, and the work is now nearly completed.
- Police and jails. The District contains 13 police stations or *thānas* and 5 outposts. The District Superintendent has jurisdiction in Dumkā town, the Deogarh subdivision, and the parts of Pākaur, Rājmahāl, and Goddā outside the Dāman-i-koh. The force subordinate to him in 1903 consisted of 6 inspectors, 28 sub-inspectors, 33 head constables, and 335 constables. In addition to these, a company of military police, 100 strong, is stationed at Dumkā. The remainder of the District is excluded from the jurisdiction of the regular police; and police duties are performed under the police rules of 1856 by the village headman, a number of villages being grouped together under a *parganaī*, *ghātwāl*, or *sardār*, who corresponds to a *thāna* officer. The *parganaī* is the Santāl tribal chief, the *ghātwāl* a police service-tenure holder, and the *sardār* a Pahāria tribal chief. As these indigenous police officials did not satisfactorily cover the whole non-police area, Regulation III of 1900 was passed, under which stipendiary *sardārs* are appointed to groups of villages where there is no existing and properly remunerated officer, and are paid by a cess on the villagers. There are in the Dāman-i-koh 33 *parganaīs* and 20 hill *sardārs*. Excluding these, there are in the Dumkā subdivision 55 stipendiary *sardārs*, 4 *ghāt sardārs* remunerated by holdings of land, and 819 *chaukidārs*, and in the Jāmtāra subdivision 2 *ghātwāls*, 27 *sardārs*, and 523 *chaukidārs*. In all, *chaukidārs* number 3,965. A District jail at Dumkā has accommodation for 140 prisoners, and subsidiary jails at Deogarh, Goddā, Rājmahāl, Jāmtāra, and Pākaur for 116.
- Education. Education is very backward, only 2.5 per cent. of the population (4.7 males and 0.2 females) being able to read and write in 1901; but progress has been made since 1891, when only 2.8 per cent. of the males were literate. The number of pupils under instruction increased from about 17,000 in 1883 to 18,650 in 1892-3, 22,755 in 1900-1, and 27,284 in 1903-4, of whom 1,314 were females. In that year, 9.3 per cent. of the boys and 0.95 per cent. of the girls of school-going age were at school. The educational institutions consisted of 26 secondary, 912 primary, and 90 special schools, among which may be mentioned a training school for *gurūs* at Taljhari under the Church Missionary Society, a training school at Benāgaria under the Lutheran Mission, and the Madhupur

industrial school maintained by the East Indian Railway Company. A special grant of Rs. 9,500 is annually made by Government to encourage primary education among the Santāls, and 5,555 aborigines were at school in 1900. The total expenditure on education in 1903-4 was 1.81 lakhs, of which Rs. 78,000 was met from Provincial revenues, Rs. 1,100 from municipal funds, and Rs. 45,000 from fees.

In 1903 the District contained 10 dispensaries, of which Medical. 7 had accommodation for 89 in-patients. The cases of 60,000 out-patients and 800 in-patients were treated, and 2,686 operations were performed. The expenditure was Rs. 15,000, of which Rs. 5,000 was met from Government contributions, Rs. 1,000 from Local and Rs. 2,300 from municipal funds, and Rs. 6,000 from subscriptions. Two of the dispensaries in the Dāman-i-koh are maintained by an annual subscription among the Santāls of an anna per house, Government providing the services of a civil Hospital Assistant. In addition, the various missionary societies all maintain private dispensaries. The Rāj Kumāri Leper Asylum, a well-endowed institution with substantial buildings, is managed by a committee of which the Deputy-Commissioner is chairman.

Vaccination is compulsory only in municipal areas. In Vaccination. 1903-4 the number of persons successfully vaccinated was 76,000, or 42.5 per 1,000.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xv (1877), and *Annals of Rural Bengal* (1868); W. B. Oldham, *Santāl Parganas Manual* (Calcutta, 1898); H. H. Heard, *Ghātawālī and Mul-ryoti Tenures as found in Deogarh* (Calcutta, 1900); F. B. Bradley-Birt, *The Story of an Indian Upland* (1905).]

Deogarh Subdivision.—Western subdivision of the Santāl Parganas District, Bengal, lying between 24° 3' and 24° 38' N. and 86° 28' and 87° 4' E., with an area of 952 square miles. The subdivision is an undulating country of long ridges separated by intervening depressions; there are also several clusters of rocky hills covered with jungle. The population in 1901 was 297,403, compared with 284,115 in 1891, the density being 312 persons per square mile. It contains two towns, DEOGARH (population, 8,838), the head-quarters, and MADHUPUR (6,840); and 2,368 villages. At Deogarh are the celebrated temples of Baidyanāth.

Goddā Subdivision.—Subdivision of the Santāl Parganas District, Bengal, lying between 24° 30' and 25° 14' N. and 87° 3' and 87° 36' E., with an area of 967 square miles. The

subdivision comprises two distinct portions : to the west and south is a hilly country with rolling uplands covered with rock and jungle, and to the east an alluvial plain of great natural fertility. The population in 1901 was 390,323, compared with 384,971 in 1891. It contains 1,274 villages, one of which, GODDĀ, is the head-quarters ; but no town. In the east the subdivision, which has a density of 404 persons per square mile, contains part of the sparsely inhabited Dāman-i-koh Government estate ; but the Mahāgamā and Goddā *thanās* to the west form one of the most fertile and densely populated tracts in the District.

Pākaur Subdivision.—Eastern subdivision of the Santāl Parganas District, Bengal, lying between $24^{\circ} 14'$ and $24^{\circ} 49'$ N. and $87^{\circ} 23'$ and $87^{\circ} 55'$ E., with an area of 683 square miles. The western portion of the subdivision is a sharply defined belt of hilly country stretching southwards ; it contains some cultivated valleys, but much of the land is rocky and sterile. The eastern portion is a flat alluvial country, where rice is largely cultivated. The population in 1901 was 238,648, compared with 230,256 in 1891. It contains 1,055 villages, of which PĀKAUR is the head-quarters ; but no town. The subdivision, which has a density of 349 persons per square mile, contains part of the sparsely inhabited Dāman-i-koh Government estate ; but the Pākaur *thāna* in the east is fertile and densely populated.

Rājmahāl Subdivision.—North-eastern subdivision of the Santāl Parganas District, Bengal, lying between $24^{\circ} 43'$ and $25^{\circ} 18'$ N. and $87^{\circ} 27'$ and $87^{\circ} 57'$ E., with an area of 741 square miles. The subdivision contains a narrow strip of alluvial soil along the banks of the Ganges, which forms its eastern boundary, but the greater part is hilly country stretching southwards from Sāhibganj. The population in 1901 was 276,703, compared with 276,395 in 1891, the density being 373 persons per square mile. It contains one town, SĀHĪBGANJ (population, 7,558), an important centre of trade ; and 1,292 villages, of which RĀJMAHĀL is the head-quarters. A large part of the Dāman-i-koh Government estate lies within the subdivision.

Dumkā Subdivision.—Head-quarters subdivision of the Santāl Parganas District, Bengal, lying between $23^{\circ} 59'$ and $24^{\circ} 39'$ N. and $86^{\circ} 54'$ and $87^{\circ} 42'$ E., with an area of 1,429 square miles. The subdivision consists for the greater part of a rolling open country, but large tracts are occupied by hill and forest. The population in 1901 was 416,861, compared

with 404,312 in 1891, the density being 292 persons per square mile. It contains 2,105 villages, and DUMKĀ, the head-quarters, has recently been constituted a municipality. A portion of the Dāman-i-koh Government estate lies within the subdivision.

Jāmtāra Subdivision.—South-western subdivision of the Santāl Parganas District, Bengal, lying between $23^{\circ} 48'$ and $24^{\circ} 10'$ N. and $86^{\circ} 30'$ and $87^{\circ} 18'$ E., with an area of 698 square miles. The subdivision, which is bounded on the south by the Barākar and is intersected by the Ajay river, is a rolling country, in places rocky and covered with jungle, and resembles in its general features the adjoining District of Mānbhūm. The population in 1901 was 189,799, compared with 173,726 in 1891, the density being 272 persons per square mile. It contains 1,073 villages, of which JĀMTĀRA is the head-quarters; but no town.

Dāman-i-koh ('Skirts of the hills').—A tract of hilly country in the Dumkā, Rājmahāl, Pākaur, and Goddā subdivisions of the Santāl Parganas District, Bengal, with an area of 1,351¹ square miles. When the East India Company first assumed the Dīwāni of Bengal in 1765, the tribes who inhabited this tract were practically independent. They soon forced themselves, however, on the notice of Government by marauding inroads into the plains; but between 1779 and 1784 Augustus Cleveland, Collector of Bhāgalpur, succeeded in winning their confidence and reducing them to order. He allotted stipends to the tribal headmen, recruited a corps of Hill Rangers among the Pahārias, and founded special tribunals presided over by tribal chiefs. Government, to pacify the country, took practical possession of it to the exclusion of the *zamīndārs* who had previously been its nominal owners. The tract was therefore omitted from the Permanent Settlement, and finally in 1823 Government definitely asserted its title to the hills and the fringe of uninhabited country lying at their feet. Mr. Ward was appointed to demarcate the limits of the Government possession, and the rights of the *jāgīrdārs* over the central valley of Mānjhuā were finally resumed in 1837. A Superintendent of the Dāman was appointed in 1835; and he encouraged the Santāls, who had begun to enter the country about 1820, to clear the jungle and bring the valleys under cultivation. The Pahārias clung to the tops and slopes

¹ In the *Census Report* of 1901 the area of the Dāman-i-koh was taken as 1,422 square miles; the figure given above is the result of inquiries made by the Settlement officer.

of the hills, which they cultivated by *jhūming*; the valleys offered a virgin jungle to the axes of the Santāls, who swarmed in from Hazāribāgh and Mānbhūm. On the heels of the Santāls came the Bihāri and Bengali *mahājans* or money-lenders. The simple and improvident Santāls found the lands which they had recently reclaimed passing into the hands of others, largely owing to the action of the law courts; and in 1855 they rose in rebellion. The subsequent history of the Dāman-i-koh will be found in the article on the SANTĀL PARGANAS, of which it now forms a part. It is still reserved exclusively for the hill tribes who were first found in it, and for the Santāls and other cognate races who began to migrate into it about 1820; foreigners are not allowed to enter it without special permission. The total population in 1901 was 358,294 persons, residing in 1,876 villages, compared with 353,413 in 1881. The great majority of these were Animists (245,971) and Hindus (96,299), though there were also some Muhammadans (13,573) and Christians (2,451). Santāls (226,540) largely outnumbered all the other races represented, of whom the most numerous were the Māle Sauriā Pahārias with 24,226 persons. The Dāman-i-koh forms a separate Government estate and is now under resettlement.

Deogarh Town.—Head-quarters of the subdivision of the same name in the Santāl Parganas District, Bengal, situated in 24° 30' N. and 86° 42' E., 4 miles to the east of the chōrd-line of the East Indian Railway, with which it is connected by a steam tramway. Population (1901), 8,838. The principal object of interest is the group of twenty-two temples dedicated to Siva, which form a centre of pilgrimage for Hindus from all parts of India. The oldest temple is called Baidyanāth, or Baijnāth, and is said to contain one of the twelve oldest *lingams* of Siva in India. The legend of the temples is told by Sir W. W. Hunter in the *Annals of Rural Bengal*. The group of temples is surrounded by a high wall enclosing an extensive courtyard with a pavement of Chunār freestone, the offering of a rich Mirzāpur merchant, which cost a lakh. All the temples but three are dedicated to Siva in his form of Mahādeo; the remaining three are dedicated to his wife Pārvatī. The male and female temples are connected from the summits with silken ropes, 40 and 50 yards in length, from which hang gaudily-coloured cloths, wreaths, and garlands of flowers and tinsel. At the western entrance to Deogarh town is a masonry platform, about 6 feet in height and 20 feet square, supporting three huge monoliths of contorted

gneiss; two are vertical, the third being laid upon the heads of the two uprights as a horizontal beam. These massive stones are 12 feet in length, quadrilateral in form, and each weighs upwards of 7 tons. There is a faint attempt at sculpture at each end of the vertical faces of the horizontal beam, representing either elephants' or crocodiles' heads. A few ruins, like those of ancient Buddhist *vihāras*, stand near the monolithic group. Deogarh was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 9,500, and the expenditure Rs. 8,500. In 1903-4 the income and expenditure were Rs. 11,800, the principal sources of income being a tax on persons (or property tax) and a conservancy rate.

Dumkā Town (or Nayā Dumkā).—Head-quarters of the Santāl Parganas District, Bengal, situated in $24^{\circ} 16' N.$ and $87^{\circ} 15' E.$ Population (1901), 5,326. Dumkā is one of the oldest British stations in Bengal. It is shown on the map of 1769 as 'Dumcaw,' and was then a post of *ghātwāli* police in the Bīrbhūm jurisdiction. In 1795 Dumkā was transferred to Bhāgalpur, and was made the site of one of the four Kohistānī police *thānas* for the regulation of the Rājmahāl hills. The name frequently occurs in old records as Dumkah or Doomka till 1855, when it was first called Nayā Dumkā by the officer commanding a detachment of troops stationed there during the Santāl rebellion. It is only occasionally called by the latter name now. The present station is on the site of the old *ghātwāli* post. In 1855 Dumkā became the head-quarters of the Santāl Parganas District, but was soon afterwards abandoned and left only as the head-quarters of the Dumkā sub-district. In 1872 the sub-districts of the Santāl Parganas were changed into subdivisions, and Dumkā again became the head-quarters of the whole District. It contains the usual public offices, but is otherwise only a small bazar on the banks of the Mor river, carrying on a little trade in local produce, European piece-goods, &c. It was constituted a municipality in 1903. In 1904-5 the income was Rs. 7,700, of which Rs. 4,000 was derived from a tax on houses and lands; and the expenditure was Rs. 5,000.

Goddā Village.—Head-quarters of the subdivision of the same name in the Santāl Parganas District, Bengal, situated in $24^{\circ} 50' N.$ and $87^{\circ} 17' E.$ Population (1901), 2,208.

Jāmtāra Village.—Head-quarters of the subdivision of the same name in the Santāl Parganas District, Bengal, situated in $23^{\circ} 58' N.$ and $86^{\circ} 50' E.$ Population (1901), 278.

Madhupur.—Town in the Deogarh subdivision of the Santāl Parganas District, Bengal, situated in $24^{\circ} 15' N.$ and $86^{\circ} 39' E.$, on the chord-line of the East Indian Railway. Population (1901), 6,840. Madhupur is the junction for the branch line to the Grīdīh coal-fields; it is a growing place largely used as a health resort, and many residents of Calcutta and Government pensioners have built houses here.

Pākaur Village.—Head-quarters of the subdivision of the same name in the Santāl Parganas District, Bengal, situated in $24^{\circ} 38' N.$ and $87^{\circ} 50' E.$ Population (1901), 1,519.

Rājmahāl Village.—Head-quarters of the subdivision of the same name in the Santāl Parganas District, Bengal, situated in $25^{\circ} 3' N.$ and $87^{\circ} 50' E.$, on the right bank of the Ganges. Rājmahāl is now a mere collection of mud huts, interspersed with a few respectable houses. The ruins of the old Muhammadan city, buried in rank jungle, extend for about 4 miles to the west of the modern village. After his return from the conquest of Orissa in 1592, Mān Singh, Akbar's Rājput general, selected Rājmahāl (formerly Agmahāl) as the capital of Bengal on account of its central position with respect to that Province and to Bihār, and because it commanded the Ganges and the pass of Tehāgarhi. The chief antiquities of Rājmahāl are the Jāma Masjid of Mān Singh, the palaces of Sultān Shujā and Mīr Kāsīm Alī, Nawāb of Bengal, the Phulbāri or flower garden, and numerous mosques and monuments. In the beginning of the nineteenth century Dr. Buchanan-Hamilton estimated that the town contained from 25,000 to 30,000 persons. In the Census of 1901 the population was returned at 2,047. In 1860, when the loop-line of the East Indian Railway was opened to Rājmahāl, an arm of the Ganges ran immediately under the station, forming a navigable channel for steamers and boats of all sizes. In 1863-4 the river abandoned this channel, leaving an alluvial bank in its place. Rājmahāl was till 1879 three miles distant from the main stream of the Ganges, and could be approached by large boats only during the rains. In that year the Ganges returned to its old bed, but in 1882 it showed indications of again deserting it. In consequence of these changes the bulk of trade has been transferred to Sāhibganj, though Rājmahāl still retains the local traffic across the Ganges with Mālda District.

Sāhibganj.—Town in the Rājmahāl subdivision of the Santāl Parganas District, Bengal, situated in $25^{\circ} 15' N.$ and $87^{\circ} 38' E.$, on the Ganges, and on the loop-line of the East Indian Railway. Population (1901), 7,558. At the time of

the Census a severe outbreak of plague had led to a partial evacuation of the town, and the true population is probably about 12,000. Owing to its favourable position on the railway and river, Sāhibganj has become a great entrepôt for trade. Local produce is received by water from the trans-Gangetic tracts of Mālda, Purnea, and North Bhāgalpur, while European goods are brought by rail from Calcutta for distribution to those Districts. Sāhibganj was constituted a municipality in 1883. The income during the decade ending 1901-2 averaged Rs. 15,000, and the expenditure Rs. 14,000. In 1903-4 the income was Rs. 21,000, mainly derived from a tax on houses and lands and a conservancy rate; and the expenditure was Rs. 18,000.

Teliāgarhī.—Pass in the Santāl Parganas District, Bengal, lying between the Rājmahāl hills on the south and the Ganges on the north, and formerly of great strategic importance as commanding the military approaches to Bengal. The ruins of a large stone fort still exist, through which the East Indian Railway passes; the fort, which seems never to have been completed, was constructed in the eighteenth century by a Teli *zamīndār* who was forcibly converted by the Muhammadans.

Udhuā Nullah.—Village and stream in the District of the Santāl Parganas, Bengal, situated in 24° 0' N. and 87° 50' E. It was the site of the defeat of the army of the Nawāb Mīr Kāsim by Major Adams in 1763.

ORISSA DIVISION

Orissa Division.—Division of Bengal, extending from West Bengal to Madras and from the Chotā Nāgpur plateau to the Bay of Bengal, and lying between $19^{\circ} 28'$ and $22^{\circ} 4' N.$ and $82^{\circ} 38'$ and $87^{\circ} 31' E.$ The head-quarters of the Division are at CUTTACK CITY; and it includes five Districts, with area, population, and revenue as shown in the following table:—

District	Area in square miles.	Population, 1901	Land revenue and cesses, 1903-4, in thousands of rupees
Cuttack . . .	3,654	2,062,758	13,91
Balasore . . .	2,085	1,071,197	7,30
Angul . . .	1,681	191,911	87
Puri . . .	2,499	1,017,284	7,97
Sambalpur . . .	3,851	659,971	1,86*
Total	13,770	5,003,121	31,91

* Includes Rs 4,500 (additional rate) and Rs 18,300 (*patwārī* cess).
 In the *Census Report* of 1901 the area of Cuttack was shown as 3,629 square miles, of Balasore as 2,059 square miles, and of Puri as 2,472 square miles. The figures adopted above for Puri are taken from the Settlement Report, while those for Cuttack and Balasore were supplied by the Surveyor-General.

Sambalpur was transferred to Bengal from the Chattisgarh Division of the Central Provinces in 1905, two large *zamīndārīs* which were previously comprised within that District remaining attached to the Central Provinces.

The term Orissa, properly speaking, means the country in which the speakers of Oriyā form the dominant people. During the period of British rule the name has been applied to the tract extending from the Chilka Lake to the Subarnarekhā river, which comprises the four Districts first mentioned and also the ORISSA TRIBUTARY STATES, a group of twenty-four Feudatory States, with a population in 1901 of 3,173,395 and an area of 28,046 square miles. The Commissioner of Orissa is Superintendent of these States, in respect of which he exercises the powers of a Sessions Judge and High Court.

The population of the Division increased from 3,554,871 in 1872 to 4,309,923 in 1881, 4,666,227 in 1891, and 5,003,121 in 1901. The density is 363 persons per square

mile, compared with 438 in Bengal as a whole. In 1901 Hindus constituted 95·5 per cent. of the total; there were 106,889 Muhammadans, 90,038 Animists, and 5,751 Christians.

The four Districts first mentioned occupy a narrow alluvial tract between the sea and the Chotā Nāgpur plateau, while Sambalpur, lying in the valley of the Mahānadī, is separated from them by a broken hilly tract and from the Chhattisgarh plain on the west by a jungle-covered range of hills. The Division possesses a language of its own, and a system of castes differing alike from those of Bengal and of Madras. Oriyā is also spoken over a considerable area in the northern Districts of Madras and in the adjoining parts of the Central Provinces and of Chotā Nāgpur, while it has largely modified the Bengali of South Midnapore; the distinctive Oriyā castes are also well represented for a considerable distance beyond the borders of the Division.

At the dawn of history Orissa formed part of the powerful kingdom of Kalinga, which stretched from the mouths of the Ganges to those of the Godāvari. It was conquered by Asoka, but by 150 B.C. had again passed to the Kalinga kings. Jainism was then beginning to spread in the land; but about the second century A.D. it was succeeded, according to Buddhist tradition, by the latter creed, which was still flourishing in A.D. 640. Subsequently the power of the Kalinga dynasty declined, and Orissa seems to have become independent. In 610, however, an inscription of Sasānka, king of Magadha, claims it as a part of the dominions of that monarch, and in 640 it was conquered by Harshavardhana of Kanauj. In the tenth and eleventh centuries Orissa is said to have been under the rule of the Kesari kings, to whose rule are ascribed the Saiva temples at BHUBANESWAR and most of the ruins in the Alti hills; but the existence of such a dynasty is uncertain. Then followed the dynasty founded by Chora Gangā of Kalinganagar. These kings were of the Vaishnava faith; they built the famous temple of Jagannāth at PURĪ and the black pagoda of KONĀRAK. There were frequent wars with the Muhammadans, and about 1361 the emperor Fīroz Shāh conducted an inroad into Orissa in person. In 1434 Kapileswar Deva of the Solar line usurped the throne. He extended his dominions to the south, where Muhammadan inroads had subverted the old order, as far as the Penner river; but his successors were gradually shorn of these additions by the Musalmān rulers of Golconda. From the north also the onset of the Muhammadans became more and more insistent; and at last in 1568, after a period of civil

war, the last Hindu king, a usurper of the name of Mukund Deo, was overthrown by Kāla Pāhār, the general of Sulaimān Kararānī. Orissa (including Midnapore) remained in the possession of the Afghāns till 1592, when Mān Singh, Akbar's Hindu general, annexed it to the Mughal empire. It was placed under separate governors, but Midnapore and Balasore were subsequently transferred to Bengal. In 1751 ALI VARDI KHĀN ceded the province to the Bhonslas of Nāgpur, in whose possession it remained until its conquest by the British in 1803. The Marāthās made no attempt to establish any civil administration, and their rule was confined to a periodic harrying of the country by their cavalry, who extorted whatever they could from the people. In 1804 a board of two Commissioners was appointed to administer the province, but in the following year it was designated the District of Cuttack and placed in charge of a Collector, Judge, and Magistrate. In 1828 it was split up into the three Regulation Districts of CUTTACK, BALASORE, and PURĪ, and the non-Regulation TRIBUTARY STATES. As already explained, SAMBALPUR has only recently been attached to Orissa; and an account of its history, which differs in several respects from that of the rest of the Division, will be found in the article on that District.

Orissa has on more than one occasion suffered from disastrous famines, and within recent times it was devastated by the memorable calamity of 1865-7. The full extent of the crop failure consequent on the scanty rainfall of 1865 and the exhaustion of the local food-supplies was not realized by the authorities in time; and when at last, in June, 1866, an effort was made to provide the starving population with food, the south-west monsoon prevented the ships, lying laden with grain in the port of Calcutta, from reaching the stricken tract. It is said that a quarter of the population died of starvation and of the diseases that supervened. Orissa has now been made accessible by the East Coast section of the Bengal-Nāgpur Railway, which connects it with Calcutta and Madras; and Cuttack and portions of Balasore have been provided with an elaborate and costly system of irrigation known as the ORISSA CANALS system.

The Districts of the Orissa Division are temporarily settled, and a resettlement of all the eastern Districts, except Angul, has recently (1889-99) been effected. The area brought under assessment was 2,950 square miles, against 2,212 square miles at the previous settlement of 1837; and the revenue is 21.05 lakhs, or Rs. 1-1-10 per acre, compared with 13.84 lakhs,

or R. 0-15-7, on the previous occasion. The rents payable by tenants were fixed in the course of the settlement operations; they work out on an average to Rs. 2-1 per acre. The term of the last settlement of Sambalpur expired in 1902, and the District is now under resettlement.

The Division contains 7 towns and 15,416 villages. The largest towns are CUTTACK (population, 51,364), PURĪ (49,334), and BALASORE (20,880). There are ports at FALSE POINT, CHĀNDBĀLĪ, Balasore, and Purī, and the total value of the imports and exports in 1903-4 was 28.9 lakhs and 53.8 lakhs respectively.

The temple of Jagannāth at Purī is well-known, and the town contained at the time of the Census of 1901 over 17,000 pilgrims. Other famous antiquities are the Lingarāj temple at Bhubaneswar, the black pagoda at Konārak, several temples at JĀJPUR, and the caves in the KHANDGIRI and UDAYAGIRI hills.

[Rājendralāla Mitra, *Antiquities of Orissa* (Calcutta, 1875, 1880); A. Stirling, *Account of Orissa Proper or Cuttack* (Serampore, 1822, reprinted at Calcutta, 1904); Sir W. W. Hunter, *Orissa* (1872); G. Toynebee, *History of Orissa from 1803 to 1828* (Calcutta, 1873); S. L. Maddox, *Final Report on the Survey and Settlement of the Province of Orissa* (Calcutta, 1900), also several papers by Monmohan Chakravarti in the *Journal of the Asiatic Society of Bengal*, vol. lxi, pp. 43-9 and 1044-1109, vol. lxii, pp. 88-109, vol. lxiv, pp. 128-54, vol. lxvi, pp. 317-48, and vol. lxvii, pp. 328-86.]

Cuttack District.—District in the Orissa Division of Bengal, lying between 20° 2' and 21° 10' N. and 85° 20' and 87° 1' E., with an area of 3,654¹ square miles. It is bounded on the north by the Baitarani river and Dhāmra estuary, which separate it from Balasore District; on the east by the Bay of Bengal; on the south by Purī; and on the west by the Tributary States of Orissa.

Cuttack consists of three distinct tracts: the first is a marshy jungle-covered strip along the coast, from 3 to 30 miles in breadth; the second is an intermediate arable area of rice land in the older part of the Mahānadi delta; and the third is a broken hilly region along the western boundary. The marshy strip on the coast resembles the Sundarbans as regards its swamps, dense jungle, and noxious climate, but lacks the noble forest scenery of the Gangetic tract; it is intersected

¹ The area shown in the *Census Report* of 1901 was 3,629 square miles. The area given above is that now reported by the Surveyor-General.

by innumerable streams and creeks, whose sluggish waters deposit their silt, and form morasses and quicksands. The arable plains stretch inland for about 40 miles, and are intersected by the large rivers that emerge from the western mountains and throw out in every direction a network of branches, which, after innumerable twists and interlacings, frequently rejoin the parent stream as it approaches the sea. The third tract consists of a series of ranges, seldom exceeding 10 to 15 miles in length, with thickly wooded slopes and lovely valleys between. Elsewhere only a few isolated hills break the evenness of the plains. The chief of these are NALTIGIRI, with its sandal-trees and Buddhist remains; UDAYAGIRI, with its colossal image of Buddha, sacred reservoir, and ruined temples and caves; and ASSIA, the highest point in the District (2,500 feet), with its old mosque. The MAHĀVINYAKA peak has for ages been consecrated to the worship of Siva.

The rivers, however, constitute the conspicuous feature of Cuttack. These issue in three magnificent streams through the mountainous frontier on the west. In the extreme north the sacred BAITARANĪ, the Styx of the Hindus, emerges from Keonjhar State in which it takes its rise, and forms the boundary between Cuttack and Balasore. In the south the MAHĀNADĪ or 'great river' pours down upon the delta from between two hills at Narāj, about 7 miles west of Cuttack city, where its stream is contracted to a mile in breadth. About half-way between the two the Brāhmanī enters the District. These rivers, whose upper channels dwindle during the cold season to insignificant streams dotted here and there with stagnant pools, bring down after heavy rains an enormous mass of water from the table-lands in which they take their rise. Towards the coast they gradually converge, and their accumulated waters rush down within 30 miles of each other upon the level plain, with the result that the beds are altogether inadequate to carry off the floods, which burst over the banks and sweep across the country. After innumerable bifurcations the three rivers enter the sea by various mouths. The Baitaranī and the Brāhmanī meet before they reach the sea, and the combined stream flows into the Bay of Bengal at Point Palmyras under the name of the Dhāmra. The Mahānadī after many interlacings forms two great estuaries: one generally known as the Devī, which enters the Bay at the south-eastern corner of the District, and the other bearing the name of the parent river, the Mahānadī, which empties itself into the sea at False Point, about half-way down the coast. Each of these

great rivers throws off, on its way through the District, a number of distributaries, those of the Mahānadī being the most numerous and important. The chief offshoots of the Mahānadī are the Kātjurī, Paikā, Birūpā, and Chitartala. The Brāhmanī receives, a little above its junction with the Baitaranī, an important tributary, the Kharsuā, which is itself an offshoot of the Brāhmanī.

To the south of the Brāhmanī river as far east as the Ulti Geology-
pargana numerous gneissic hills are scattered over the country. For some miles the gneiss is compact, but farther south it assumes a peculiar more or less decomposed form, marked by numerous red blotches, the remains of disintegrated garnets. This form of gneiss is occasionally quarried for various purposes, its softness rendering it easy to work. The estate of Bānki contains some fine hills, the main peaks running in a semicircle from near Bānkigarh to the village of Baideswar. These are partly of garnetiferous gneiss like those mentioned above, and partly of more compact and hornblendic rock. A large undulating plain to the south is partly covered with laterite, through which the gneiss rises at intervals. The hills near the Mahānadī west and south-west of Cuttack are formed of coarse grits, sandstones, and conglomerates, with subordinate white or pinkish clay belonging to the Gondwāna system¹.

In the Mahānadī delta swampy places on the banks of rivers Botany.
and creeks near the sea have the vegetation of a mangrove forest. Where sand-dunes intervene between the sea and the cultivated land behind, an equally characteristic littoral vegetation is met with, the principal species being *Spinifex*, *Hydrophylax*, and *Geniosporum prostratum*. The cultivated land bears the usual rice-field weeds, while ponds and ditches are filled with floating water-weeds or submerged water-plants. Near human habitations shrubberies of semi-spontaneous origin are common. This undergrowth is loaded with a tangled mass of climbing *Convolvulaceae*. The arborescent portion of the village shrubberies includes the red cotton-tree (*Bombax malabaricum*), *jiyal* (*Odina Wodier*), *Tamarindus indica*, *Moringa pterygosperma*, *pīpal* (*Ficus religiosa*), banyan (*Ficus bengalensis*), and the palms *tāri* (*Borassus flabellifer*) and *khajur* (*Phoenix sylvestris*). There are no forests; but in the north-west espe-

¹ *Memoirs, Geological Survey of India*, vol. i, pt. iii, 'On the Geological Structure and Physical Features of the Districts of Bānkurā, Midnapore, and Orissa', and *Records, Geological Survey of India*, vol. v, 'Sketch of the Geology of Orissa,' by W. T. Blanford.

cially are found other species of a more truly forest character, among them being *Ailanthus excelsa*, *Pterocarpus Marsupium*, *Pterospermum Heyneanum*, *Dalbergia paniculata* and *D. lanceolaria*, *Adina cordifolia*, *Schleichera trijuga*, and the like. The usual bamboo is *Bambusa arundinacea*. Open glades are filled with grasses, sometimes of a reedy character. Sedges are abundant and ferns are fairly plentiful.

Fauna.

Tigers, bears, leopards, wild buffaloes, antelope, spotted deer, hog deer, hyenas, jackals, foxes, and wild hog are found. Fish-eating and man-eating crocodiles abound in all the rivers and creeks, and grow to a very large size. Comparatively little loss of life is caused by tigers and leopards, as these animals are confined chiefly to the dense jungles on the coast, or to the hilly portion of the District, where the population is sparse and where deer and hog supply them with sufficient food.

Climate,
tempera-
ture, and
rainfall.

The District is directly on the track of the cyclonic storms which cross Orissa frequently during the monsoon season, and the extremes of climate are more marked than in most other parts of Bengal. In April and May the average maximum temperature is 102°. The mean temperature falls from 88° in the hot months to 83° in the monsoon season and 69° in February. Owing to the occasional dry westerly winds in the hot season and to the later well-marked south-west monsoon conditions, humidity undergoes considerable variation, ranging on an average from 72 per cent. in April and May to 83 per cent. in August. The annual rainfall averages 60 inches, of which 4.6 inches fall in May, 9.9 in June, 11.7 in July, 12.3 in August, 10.3 in September, and 5.8 in October. Cyclonic storms occasionally occur in the north of the Bay in May, and with these storms weather of the south-west monsoon type prevails over the whole of Orissa.

Natural
calamities.

The Orissa coast is not ordinarily liable to suffer from cyclones, which usually move towards the Arakan or Bengal coast. But in recent years several severe cyclones have been experienced, the most notable being that of September 23, 1885, which was accompanied by a storm-wave that caused much loss of life and property near the coast. In the Kendrāpāra subdivision alone 5,000 lives were reported to have been lost, while serious damage was caused to crops and houses. The Kanikā estate, which includes a considerable part of the affected sea-board, suffered most severely and many villages then destroyed have not since been inhabited. The salt deposited on the lands by the tidal wave affected the crops for about five years. As already stated, floods often occur,

owing to the large volume of water brought down by the rivers during heavy rains. These cause much damage to crops and sometimes also to houses; and on the occasion of eight such floods, which occurred between 1831 and 1867, remissions of revenue were granted amounting to 8 lakhs. The canal system, which includes a number of high embankments serving the double purpose of protecting the irrigation works and the enclosed country from the action of floods, was opened in 1868; and since that year no remissions of land revenue have been necessary. The canal embankments, however, by contracting the spill channels have increased the liability of the low un-embanked tracts to floods, and the problem of protecting the crops of these areas from periodical loss is still unsolved.

The District has no separate history, apart from that which History. will be found in the article on ORISSA. The city of CUTTACK possesses a special importance as having been for upwards of a thousand years the capital of the province. The ruins of a fort still stand at CHATIA, and other interesting archaeological remains exist at NALTIGIRI and UDAYAGIRI.

The population increased from 1,544,210 in 1872 to 1,795,065 The people. in 1881, 1,937,671 in 1891, and 2,062,758 in 1901. The Census of 1872 was doubtless inaccurate, but a large part of the recorded growth between that date and 1881 was due to the recovery of the District from the terrible famine of 1866. The progress in the next decade would have been greater but for the cyclone of 1885. The District is healthy and comparatively free from malaria, but suffers from occasional epidemics of cholera.

The chief statistics of the Census of 1901 are given below :—

Subdivision	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Cuttack .	1,562	1	2,599	1,035,275	663	+ 5.4	79,876
Kendrapāra .	977	1	1,338	467,081	478	+ 8.7	36,135
Jāipur .	1,115	1	1,580	560,402	503	+ 6.6	43,075
District total	3,654	3	5,517	2,062,758	565	+ 6.5	159,086

The towns are CUTTACK, the head-quarters, JĀIPUR, and KENDRĀPĀRA. The population is sparse on the lower slopes of the hills and also on the sea-coast; but between these two extremes the population is dense, rising in the Sālīpur *thāna* to

933 persons per square mile, whereas Aul on the sea-coast has only 298, and the hilly Bānki 377. There is a large emigration to the sparsely inhabited Native States to the west, and to the neighbouring Districts of Balasore and Purī. Numbers go to the metropolitan Districts, where they serve as palanquin bearers, doorkeepers, and labourers. Natives of Cuttack are also found as cooks and domestic servants throughout Bengal, and as cultivators and field-labourers in the Sundarbans, while many have emigrated to Assam and the United Provinces. The language of the District is Oriyā. Hindus number 2,002,573, or 97 per cent. of the total, and Musalmāns 57,356, or 2·8 per cent.

Castes and
occupa-
tions

The chief castes are Brāhmans (195,000), Khandaits (375,000), Chāsas (266,000), Gauras (140,000), Kāndras (92,000), and Pāns (103,000). The Khandaits and Chāsas are practically confined to Orissa; these castes, between whom there is but a thin line of separation, often overstepped by the accession of wealth, are almost entirely agricultural. The Gauras are the herdsmen of Orissa, while the Kāndras are a low caste who in former days, with the Pāns, formed the rank and file of the local militia; they are now usually day-labourers or village *chaukidārs*. Agriculture supports 58·5 per cent. of the population, industries 18·3 per cent., and the professions 2·6 per cent.

Christian
missions.

Of 2,652 Christians (1901), 2,204 are natives. Most of these are the adherents of a Baptist mission which has been at work since 1822, and which now employs 8 missionaries and 3 evangelists. It maintains a high school affiliated to the Calcutta University, a European high school, an orphanage for boys and girls, and a printing press. A Roman Catholic mission founded in 1845 maintains in Cuttack city a chapel, a church, a convent, and a boys' school. The Catholic community number about 400, including (1901) 161 Europeans and Eurasians.

General
agricul-
tural con-
ditions.

The low-lying tract along the sea-shore is of great natural fertility where protected from the action of the salt water. A great part, however, is unprotected and unfit for cultivation, and much of the rest is exposed to damage from storm-waves. In the hilly tract along the west the soil is barren. Between these two extremes lies a fertile and highly cultivated alluvial plain, watered by the three great rivers and protected from drought by an extensive system of irrigation; its soil consists of a mixture of sand and clay in varying proportions.

The principal agricultural statistics for 1903-4 are shown below, in square miles:—

Chief agricultural statistics and principal crops.

Subdivision.	Total.	Cultivated	Cultivable waste.	Irrigated from canals
Cuttack . . .	1,562	805	62	170
Kendrapāra . . .	977	512	137	47
Jāipur . . .	1,115	586	43	50
Total	3,654	1,903	242	267

Rice is the staple food-grain, covering 1,870 square miles. It is grown in three distinct ways: namely, *sārad*, or winter rice, sown at the beginning of the monsoon and reaped in the winter season; *biāli*, or autumn rice, sown a month earlier and harvested about the beginning of September; and *dālua*, or spring rice, sown at the commencement of the cold season and harvested in March. The winter rice, which is raised on 1,566 square miles, is by far the most important kind. After rice, the people depend mostly on pulses, sown in the autumn and harvested from January to April; these cover 161 square miles, the commonest being *kulthi*, *birhi*, *mūng*, and *rahar*. Oilseeds occupy 55 square miles, while *maruā*, sugar-cane, tobacco, potatoes, and betel-leaf are also grown.

Cultivation is steadily extending with the growth of population; but in some parts of the intermediate belt there is very little cultivable land left for reclamation, and the pressure of the population on the soil has almost reached the maximum limit. About Rs. 39,000 was advanced under the Agriculturists' Loans Act in 1896-8, but ordinarily little recourse is had to such loans.

Improvements in agricultural practice.

The cattle are similar to those found in the southern Districts of Lower Bengal. Cattle of a superior breed, resulting from the introduction of up-country bulls, may be seen here and there in towns and to a small extent in some rural areas. Sheep of a small size are bred throughout the District. Pasture grounds abound along the sea-board and in the hilly region, but elsewhere cultivation has encroached on the grazing grounds; except along the sea-board, the soil retains little moisture during the hot season. Rinderpest and foot-and-mouth disease are somewhat prevalent.

Cattle.

The greater part of the ORISSA CANALS system lies within the District. The Māchgaon canal leaves the Tāldanda canal 7 miles south of Cuttack city, and runs along the north bank of the Kājturi and of its branch the Alankā for a distance of 32 miles. It has a discharge of 776 cubic feet per second and

Irrigation.

commands about 152 square miles. The Tāldanda canal starts from the right bank of the Mahānadī immediately above the anicut, and runs in a south-eastern direction to Birābati, where it gives off the Māchgaon branch. Thence it runs along the southern bank of the Sukpaikā and the Mahānadī for a total length of 52 miles. It has a discharge of 1,342 cubic feet per second, of which about half is taken off by the Māchgaon canal, and it commands 117 square miles. The Kendrāpāra canal has a total length of 39 miles and a discharge of 1,067 cubic feet per second. The area commanded by it is 169 square miles, and its 23 distributaries are capable of watering 152 square miles. Its branch, the Gobri canal, has a total length of 15 miles and commands 33 square miles, but the distributaries constructed can irrigate only 14 square miles. The Gobri extension is only 6 miles long, but commands an area of 50 square miles, of which, however, only 12 miles can be irrigated by the distributaries constructed. The Patāmundaī canal, branching off from the Kendrāpāra canal just below the Birūpā head-works, skirts the southern bank of that river and of the Brāhmanī for a total length of 47 miles. It has a discharge of 885 cubic feet per second and commands an area of 80 square miles, its distributaries being capable of irrigating 69 square miles. The High-level Canal forms part of the original scheme for connecting Purī with Calcutta. It consists of three ranges, of which the first and the second, covering a total distance of $45\frac{1}{2}$ miles, lie in this District. It is very picturesque, skirting the base of the wooded hills along the western boundary. The two ranges command an aggregate area of 92 square miles, of which, however, only a small proportion is actually irrigated. The Jājpur canal, starting from the head-works at the point of bifurcation of the Baitaranī, runs for $6\frac{1}{2}$ miles to the town of Jājpur. It has a discharge of 7,000 cubic feet per second and commands 109 square miles. The total area irrigated from Government canals in 1903-4 was 267 square miles, practically all under rice. The rainfall is usually ample, and the value of canal-irrigation lies less in the improvement which it may render possible in the out-turn of an ordinary year than in the protection which it affords against a failure or partial failure in years of drought. Well-water is used only for garden crops and betel plantations. No tanks or other private works are used in ordinary seasons, but in times of drought the winter rice crop is irrigated from all available natural and artificial reservoirs; possibly one-eighth of the crop may be saved by these means.

Sandstone, laterite, and rubble are quarried from the hills in Minerals. the western borders, but only for the railway and local use. The soft decomposing gneiss is used for building purposes.

The silver filigree work of Cuttack city is well-known. Cotton-weaving is extensively carried on; and other manufactures are bell-metal work, lac and brass ornaments, pottery, hardware, gunny-bags, and baskets. Neat toys and sticks are turned from buffalo horn, deer horn, and ivory, and are largely bought by the pilgrims who pass through the District. The other hand industries are of the primitive description found in most parts of Bengal.

The chief exports are rice to Calcutta, Mauritius, and Ceylon; oilseeds, hides, jute, timber, horns, lac, nux-vomica, beeswax, resin, and silver filigree work to Calcutta; and bones to Calcutta and Ganjām. The chief imports are piece-goods, kerosene oil, crockery, glass-ware, fancy goods, metals, yarn, betel-nuts, and spices from Calcutta; salt from Calcutta and the Madras Presidency; jungle products, grain, and oilseeds from the Tributary States and the Central Provinces; and spices and condiments from Ganjām. The local trade is mainly in the hands of the Baniyā, Teli, Kewat, Guriā, Pātra, and Golā castes. The chief trade centres are Cuttack city, False Point port, and Chāndbāli, which is situated just outside the District. In 1903-4 the exports by sea from False Point port were 21 lakhs and the imports Rs. 6,000; practically the whole of this was foreign trade.

The Cuttack-Midnapore extension of the Bengal-Nāgpur Railway intersects the District from north to south. The Orissa trunk road from Calcutta to Ganjām and the roads from Cuttack to Puri and Sambalpur are maintained from Provincial funds, their total length in the District being $61\frac{1}{2}$ miles. In addition to these, 32 miles of metalled and 732 miles of unmetalled roads, including 382 miles of village tracks, were maintained in 1903-4 by the District board, the most important being those from Cuttack city to Tāldanda, Māchgaon, and Chāndbāli, and from Phulnākhra to Mādhāb. Feeder-roads from the interior to stations on the railway are being gradually constructed with the help of Government grants.

The rivers almost dry up in the hot season in the upper reaches, while during heavy floods they become too dangerous for navigation. The anicuts constructed across them have also cut off direct communication from the upper to the lower reaches. The Mahānadī affords unobstructed communication above the anicut with Sambalpur, from which

Arts and
manufac-
tures.

Commerce.

Railways
and roads.

Water
communi-
cations.

grain is brought down by boats during the rains; but the traffic has been diminishing since the opening up of Sambalpur by railway. In the lower tidal reaches boats are largely used. The Tāldanda, Kendrāpāra, Gobri, High-level, and Jājpur canals are navigable, but their traffic has declined since the opening of the railway.

Steamers carrying passengers and goods ply three times a week from Cuttack city to Chāndbāli port by canal, and from Chāndbāli to Calcutta by sea. Cargo steamers call at False Point at irregular intervals.

Famine. The crops are liable in unprotected areas to loss from deficient or unevenly distributed rainfall, and from the uncontrolled river-floods. The Bengal famine of 1770 was grievously felt in Orissa, but in recent times the great famine of 1865-7 is the only one comparable with that calamity. The rainfall of 1865 was scanty and ceased prematurely, so that the out-turn of the crop of winter rice, on which the population mainly depends, was reckoned at less than a third of the average. The gravity of the occasion was not perceived, and no special inquiries were instituted, while prices long remained so moderate that they offered no temptation to importers and forced no reduction in consumption on the inhabitants, till suddenly the province was found to be almost bare of food. In May, 1866, it was discovered that the markets were so empty that the jail prisoners and the Government establishments could not be supplied. But the southern monsoon had now begun, and importation by sea or land became nearly impossible. Orissa was at that time almost isolated from the rest of India; the only road, leading to Calcutta across a country intersected by large rivers and liable to inundation, was unmetalled and unbridged; and there was very little communication by sea. By great exertions, the Government succeeded in importing about 10,000 tons of grain by the end of November; and this was given away gratuitously, or sold at low rates, or distributed in wages to the starving population. But meanwhile the mortality among those whom this relief did not reach, or reached too late, had been very great; and it was estimated that more than 100,000 persons had died. Though the general famine may be said to have come to an end in November, when the new crop began to come into the market, great distress still continued in some parts of the country. The rainfall of the year was so heavy as to cause floods in the Mahānadi river; and, while the harvests in the higher lands were excellent, in all the low lands the inundations drowned

the crop. Half the District was thus devastated; in January, 1867, forty deaths a day from starvation were reported, and the work of relief had to be taken up again. Altogether about 40,000 tons of rice were imported and lavishly distributed; and about half had been disposed of, when the monsoon of 1867, followed by an unusually fine harvest, altogether put an end to the famine in 1868. No complete statistics of the numbers relieved and of the expenditure incurred are available; but the mortality was estimated at one-fifth to one-fourth of the population, and altogether nearly $1\frac{1}{2}$ crores was expended in Orissa during this famine. Owing to the protection afforded by the irrigation works, no famine has occurred since.

For administrative purposes the District is divided into three subdivisions, with head-quarters at CUTTACK CITY, KENDRĀ-PĀRA, and JĀJPUR. The Magistrate-Collector is ordinarily assisted at Cuttack by six Deputy-Magistrate-Collectors, a Sub-Deputy-Collector, and occasionally a Joint-Magistrate. The Kendrāpāra and Jājpur subdivisions are in charge of Deputy-Magistrate-Collectors, a Sub-Deputy-Collector being occasionally deputed to help them. A *tahsīl kacheri* at Bānki, the head-quarters of the Government estate of that name, is in charge of a Sub-Deputy-Collector. Three Executive Engineers of the Public Works department are also employed within the District. In addition to the revenue staff mentioned above, a Deputy-Collector with certificate powers is engaged in the collection of water rates under the supervision of the Superintending Engineer of the Orissa Circle.

The jurisdiction of the District and Sessions Judge extends also over Purī and Balasore Districts. Subordinate to him for civil cases is a staff consisting of a Sub-Judge at Cuttack with jurisdiction over Purī and Balasore Districts also, and four Munsifs, of whom two are stationed at Cuttack and one each at Kendrāpāra and Jājpur; additional Munsifs are posted to these stations when necessary. In addition to the court of the District-Magistrate, all the above-mentioned magistrates, except a Deputy-Collector in charge of excise and income-tax, exercise magisterial powers. The District is singularly free from serious crime; the commonest offences are burglary and petty theft. In the early days of British administration Cuttack had an unenviable reputation for the number of murders committed; dacoities and cattle-stealing on a large scale were common; and several cases of *sati* occurred annually.

The early Hindu rulers of Orissa recognized no middlemen between themselves and their subjects, and every cultivator was

District subdivisions and staff.

Civil and criminal justice.

Land revenue.

in theory bound to pay to his sovereign a share of the produce of his land. The nominal proportion was one-sixth, but in fact it varied widely and was often much more. The residents of each village paid their quota through a headman (*padhān*), who in consideration of the trouble of collection was allowed to hold a certain area rent free. The village accounts were checked by an accountant called *bhoi*, who likewise was paid by a grant of land. The villages were grouped into large divisions of 10 to 50 square miles, each of which was called a *khand* or *bisi*, the prototype of the later Muhammadan *pargana*. Each division had an executive head, called *khand-pati*, who with the divisional accountant, called *bhoimūl* or *bishayī*, collected the revenue and handed it over to the head of the District, called *desādhipati*. The *khandpatis* and *bhoimūls* of the Hindu period became respectively the *chaudhris* and *kānungos* of the Muhammadan period. The village headman's designation was also changed to *mukaddam*, an Arabic term meaning 'headman.' In early times every office had a tendency to become hereditary, and consequently the offices of the *chaudhris* and *kānungos*, originally created for administrative purposes, gradually became quasi-hereditary tenures. The British Government put the final seal upon the proprietary character of the tenures by recognizing the occupants as the actual owners of the soil.

The *pargana* officials widely exercised the rights of gift and sale, and an enormous number of rent-free and rent-paying tenures were thus created. Some of the rent-free tenures were confirmed as such in the first regular settlement of the District, while the rest were resumed and either admitted to direct engagement with Government or left as dependent tenures in the parent estates, according to their size. Of the rent-paying tenures some had received the right of direct payment before the British conquest, while others remained included in the parent estates as dependent tenures; some of the *mukaddami* tenures also had been separated from the parent estates and admitted to direct engagement. The British Government confirmed as proprietors all those who were paying revenue direct into the state treasury. The tenures peculiar to Orissa include *mukaddami* and *sarbarāhkkāri* holdings, which are intermediate proprietary holdings held on payment to the *zamīndār* of a rent fixed for the term of the settlement; the *lākhirāj bāzyāfti* is a resumed revenue-free tenure, and the *kharidā jamābandi* a holding of land originally purchased as waste subject to payment of rent.

The British conquest of the District was followed by a series of short-term summary settlements which ended in 1837, when the first regular settlement was undertaken. At first made only for thirty years, that settlement was subsequently extended, owing to the great famine of 1865-7, for a further term of thirty years which expired in 1897. At the settlement for thirty years then effected the revenue demand from temporarily settled estates was raised from 7.14 to 10.99 lakhs. In a large number of estates the increases were imposed gradually, and the figure given above is the final revenue that will be payable from 1908. In 1903-4 the total current land revenue demand was 12 lakhs, of which Rs. 81,000 was payable by 13 permanently settled estates, 10.78 lakhs by 4,684 temporarily settled estates, and the balance by 7 estates held direct by Government. At the last settlement the average size of each holding was 1.26 acres; but a tenant often has more than one holding, and the average area held by each agricultural family is about 3.23 acres. The rent paid by the cultivator varies widely according to the quality of the soil. Good land growing tobacco and other valuable crops pays from Rs. 12 to Rs. 25 per acre, while inferior land producing a coarse pulse sometimes pays less than R. 1. The cultivators are broadly divided into two groups, *thānī* and *pāhī* ryots. *Thānī* is a corruption of *sthānī* or *sthānīya*, literally 'local,' and the term was originally applied to every resident cultivator of a village. Its use is now restricted to the successors in interest of ancient resident ryots who were recorded as such in the first regular settlement of the District. All *thānī* ryots have occupancy rights under the Bengal Tenancy Act, and they pay no rent for their homesteads. *Pāhī* ryots have not these special privileges, but they can acquire occupancy rights under the Bengal Tenancy Act. Neither class of ryots can transfer their holdings without the landlord's consent. The prevailing system of produce rent is called *dhulī-bhāg* ('dust-share') from the fact that the entire produce, including the straw, is shared equally between the landlord and tenant. When a fixed quantity of grain is taken as rent it is called *sanjā*. In both cases the cultivator pays the whole cost of cultivation.

The table on the next page shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees.

Outside the municipalities of CUTTACK, JĀJPUR, and KEN- Local and
DRĀPĀRA, local affairs are managed by the District board, to municipal
which subdivisional local boards are subordinate. In 1903-4 govern-
ment.

its income was Rs. 1,72,000, of which Rs. 74,000 was derived from rates; and the expenditure was Rs. 1,44,000, including Rs. 67,000 spent on public works and Rs. 54,000 on education.

	1880-1.	1890-1	1900-1	1903-4.
Land revenue .	9,88	8,87	11,69	12,25
Total revenue .	14,30	14,61	19,71	20,48

Public
works.

Mention has been made of the chief roads and canals. In addition to these, the embankments of the District are of considerable importance. From time immemorial certain tracts have been protected from inundation by embankments, and under British rule this protection has been systematized; large sums have been expended on the perfecting of the embankments, especially after the famine and disastrous floods of 1865-6. The law on the subject is contained in Act III of 1855. In 1904 about 480 miles of embankments were maintained by Government, 265 miles in connexion with the canals, and 215 miles along the banks of the large rivers. A light-house is situated at False Point.

Police and
jails.

The District contains (1904) 10 police stations and 14 outposts. The force subordinate to the District Superintendent consists of 4 inspectors, 38 sub-inspectors, 41 head constables, and 489 constables. There is, in addition, a rural police force of 360 *daffadārs* and 3,585 *chaukidārs*. The District jail at Cuttack has accommodation for 409 prisoners, and subsidiary jails at Jāipur and Kendrāpāra for 12 each.

Education.

In 1901, 7.7 per cent. of the population (15 males and 0.5 females) could read and write. The number of pupils under instruction increased from 40,674 in 1881-2 to 50,670 in 1892-3 and 55,465 in 1900-1. In 1903-4, 60,257 boys and 3,739 girls were at school, being respectively 40.2 and 2.3 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 3,518: namely, an Arts college, 40 secondary, 3,277 primary, and 200 special schools. The most notable institution is the Ravenshaw College at Cuttack. The city also contains medical, survey, and training schools maintained by Government, two schools for the education of Europeans and Eurasians, known respectively as the Protestant European school and the St. Joseph's Convent (Roman Catholic), and three high schools. Of 52 girls' schools, only two teach up to the middle scholarship standard, the rest being all of the primary class. The total expenditure on education in 1903-4 was 3 lakhs, of

which Rs. 62,000 was met from Provincial funds, Rs. 52,000 from District funds, Rs. 3,000 from municipal funds, and 1.5 lakhs from fees.

In 1903 the District contained 15 dispensaries, of which Medical 4 had accommodation for 96 in-patients. At these the cases of 123,000 out-patients and 1,200 in-patients were treated, and 6,100 operations were performed. The expenditure was Rs. 41,200, of which Rs. 16,700 was met from Government contributions, Rs. 10,200 from Local and Rs. 3,700 from municipal funds, and Rs. 10,400 from subscriptions. A lunatic asylum at Cuttack city has accommodation for 43 male and 6 female lunatics.

The District is exceptionally liable to small-pox epidemics, and the death-rate from this cause in 1900-1 amounted to 3.6 per 1,000. Since that year, however, the deaths from small-pox have largely decreased and were only 289 in 1904, as compared with 7,253 in 1901; this result is attributed to the action taken against professional inoculators, of whom there were found to be 264 in the District. Vaccination is not compulsory except in municipal areas, but during 1903-4 the number of persons successfully vaccinated was 63,000, or 31.9 per 1,000 of the population.

[Sir W. W. Hunter, *Orissa* (1872), and *Statistical Account of Bengal*, vol. xviii (1877); A. Stirling, *Account of Orissa* (Serampore, 1822, reprinted at Calcutta, 1904); G. G. Toynbee, *Sketch of the History of Orissa from 1803 to 1828* (Calcutta, 1873); N. N. Banerji, *Report on the Agriculture of Cuttack* (Calcutta, 1893); S. L. Maddox, *Final Report on the Survey and Settlement of the Province of Orissa* (Calcutta, 1900); and L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1906).]

Cuttack Subdivision.—Head-quarters subdivision of Cuttack District, Bengal, lying between 20° 2' and 20° 42' N. and 85° 20' and 86° 44' E., with an area of 1,562 square miles. The population in 1901 was 1,035,275, compared with 981,991 in 1891. The west of the subdivision lies on the fringe of the Chotā Nāgpur plateau, while on the east it is bounded by the Bay of Bengal. The central tract is a fertile and densely populated plain, intersected by the Mahānadi and its offshoots. The density for the whole subdivision is 663 persons per square mile. It contains one town, CUTTACK CITY (population, 51,364), the head-quarters; and 2,599 villages.

Kendrapāra Subdivision.—North-eastern subdivision of Cuttack District, Bengal, lying between 20° 18' and 20° 48' N. and 86° 15' and 87° 1' E., with an area of 977 square miles.

The population in 1901 was 467,081, compared with 429,770 in 1891. The subdivision is a deltaic alluvial tract, bounded on the east by the Bay of Bengal and intersected by numerous rivers and streams. The strip along the coast is very sparsely populated, but the density rises towards the west, and the average for the whole subdivision is 478 persons per square mile. It contains one town, KENDRĀPĀRA (population, 15,245), the head-quarters; and 1,338 villages.

Jāipur Subdivision.—North-western subdivision of Cuttack District, Bengal, lying between $20^{\circ} 39'$ and $21^{\circ} 10'$ N. and $85^{\circ} 42'$ and $86^{\circ} 37'$ E., with an area of 1,115 square miles. The population in 1901 was 560,402, compared with 525,910 in 1891. The west of the subdivision lies on the fringe of the Chotā Nāgpur plateau, and this portion is very sparsely populated; towards the east, which consists of a fertile highly cultivated plain, the density increases, the average for the whole subdivision being 503 persons per square mile. It contains one town, JĀIPUR (population, 12,111), the head-quarters; and 1,580 villages.

Alamgīr Hill.—Peak of the Assia range in the Jāipur subdivision of Cuttack District, Bengal, situated in $20^{\circ} 39'$ N. and $86^{\circ} 14'$ E. On the summit of the hill, 2,500 feet above the level of the surrounding country, stands the mosque of Takht-i-Sulaimān, a plain stone building consisting of a single room surmounted by a dome, built in 1719 by Shujā-ud-dīn, the Orissa deputy of the Nawāb Murshid Kulī Khān.

Assia.—Range of hills in the Jāipur subdivision of Cuttack District, Bengal, lying between $20^{\circ} 35'$ and $20^{\circ} 41'$ N. and $86^{\circ} 14'$ and $86^{\circ} 17'$ E., and containing interesting Buddhist, Muhammadan, and Hindu remains. The principal hills are ALAMGĪR, UDAYAGIRI, Baradihi, NALTIGIRI, and the outlying peak of Amrāvati or CHATIĀ.

Chatīā.—Hill in the Jāipur subdivision of Cuttack District, Bengal, situated in $20^{\circ} 39'$ N. and $86^{\circ} 3'$ E., on the trunk road near the village of the same name. On the east side of the hill are the ruins of a fort called Amrāvati. The walls are made of laterite and are quadrangular, with one gate facing the east. The *zanāna* rooms are indicated by a high platform with broken pillars, and on a smaller platform stood a temple, now fallen. On one of the platforms are two well-carved life-size images of Indra and his wife Indrānī. According to local tradition, Amrāvati was one of the five *Katakas* or forts of the Kesari dynasty. On the west side of the hill is a small cave with a veranda, probably the work of Jain ascetics.

Cuttack City (*Kataka*, 'the fort').—Head-quarters of Cuttack District and of the Orissa Division, situated in $20^{\circ} 29' N.$ and $85^{\circ} 52' E.$, on the peninsula formed by the bifurcation of the Mahānadī where it throws off the Kāṭjurī. The place first sprang into importance in the tenth century, when protecting dikes were built and a fort was constructed by the Hindu king Makar Kesari. An ancient fort, called Bārabāti Kilā, of undoubted Hindu origin, is still one of the most conspicuous monuments in the city. Cuttack was the head-quarters of both the Mughal and the Marāthā administrations, and for many years after its occupation by the British gave its name to the whole province. The population, which was 42,667 in 1872 and 42,656 in 1881, increased to 47,186 in 1891 and 51,364 in 1901, including 4,810 persons in cantonments. In 1901 Hindus numbered 40,320, Muhammadans 8,886, and Christians 2,047, while there were a few Brahmos and Jains. Cuttack is noted for its filigree work. The trunk road passes through it, and the principal roads in the District converge on it; it is also served by the Mahānadī, and is connected by canal with Chāndbāli and False Point.

Cuttack was constituted a municipality in 1876. The income during the decade ending 1901-2 averaged Rs. 48,000, and the expenditure Rs. 42,000. In 1903-4 the income was Rs. 54,000, including Rs. 19,000 from a tax on persons (or property tax), Rs. 10,000 from a conservancy rate, and Rs. 9,000 from tolls. The incidence of taxation was R. 0-15-2 per head of the population. In the same year the expenditure was Rs. 52,000, the chief items being Rs. 21,000 spent on conservancy, and Rs. 8,000 on roads. In the cantonment a wing of a native infantry regiment is stationed. The receipts and expenditure of the cantonment fund during the decade ending 1900-1 averaged Rs. 4,800 and Rs. 4,700 respectively. In 1903-4 the income was Rs. 11,500, and the expenditure Rs. 7,250. Cuttack is the head-quarters of a Superintending Engineer and three Executive Engineers. In addition to the usual public offices, the chief public works are the stone embankments by which the city is protected from inundation, the Mahānadī railway bridge, and the Mahānadī irrigation anicut. The District jail has accommodation for 409 prisoners, who are employed on oil-pressing, the preparation of coir fibre, carpet-making, and weaving. Cuttack contains several important educational institutions, the most notable being the Ravenshaw College. This is divided into a general department teaching from the F.A. to the M.A. standard, and a law

department preparing students for the B.L. examination; it also possesses a high school teaching up to the matriculation standard. There are medical, survey, and training schools maintained by Government, the Protestant European school and St. Joseph's Convent (Roman Catholic) for the education of Europeans and Eurasians, both of which receive grants-in-aid, and three other high schools. The Cuttack General Hospital has beds for 60 male and 22 female patients.

False Point.—Cape, harbour, and lighthouse in the Kendrāpāra subdivision of Cuttack District, Bengal, situated in $20^{\circ} 20' N.$ and $86^{\circ} 47' E.$, on the north of the Mahānadī estuary. It takes its name from the circumstance that it was often mistaken by ships for Point Palmyras, one degree farther north. Ships have to anchor in a comparatively exposed roadway, and loading and unloading can be carried on only in moderately fair weather. A considerable export of rice, however, still takes place to Mauritius and Ceylon chiefly in sailing ships, valued in 1903-4 at 19.65 lakhs, while the export to the Madras Presidency amounted to over a lakh. The lighthouse stands in $20^{\circ} 19' 50'' N.$ and $86^{\circ} 47' 30'' E.$

Jāipur Town.—Head-quarters of the subdivision of the same name in Cuttack District, Bengal, situated in $20^{\circ} 51' N.$ and $86^{\circ} 20' E.$, on the right bank of the Baitaranī river. Population (1901), 12,111. Under the early kings of the Kesari dynasty Jāipur was the capital of Orissa, and in the sixteenth century it was the scene of the struggle between the Musalmāns and Hindus, from which it emerged in ruins. It is still a resort for pilgrims, but has comparatively little trade. It contains many interesting buildings, among which the most striking are the temples of Birajā Devī and of the Boar incarnation of Vishnu, and the great sun pillar that stands a mile outside the town. This latter consists of a huge and beautifully proportioned column of stone raised on a solid pedestal; and if the temple was in proportion, it must have been of a remarkable size. All traces of it have, however, disappeared, and the column has escaped only owing to its great weight, which prevented its would-be destroyers from moving it. Besides these, some ancient heroic figures of gods and goddesses are standing or lying in the compound of the subdivisional office. They are considered to be fine specimens of Hindu art, but all bear traces of Muhammadan vandalism in their mutilated features, from which the noses were cut by the renegade Kāla Pāhār. Interesting, too, are the grim features of the seven 'mothers of the earth' in a dark little

gallery by the river bank, but there is little beauty in any of these early works. The Muhammadan mosque built by Nawāb Abu Nasīr in the seventeenth century is an elegant building, which has lately been restored by the Public Works department. Jājpur was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 5,800, and the expenditure Rs. 5,300. In 1903-4 the income was Rs. 7,600, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 6,700. The town contains the usual public offices. The sub-jail has accommodation for 12 prisoners.

Kendrāpāra Town.—Head-quarters of the subdivision of the same name in Cuttack District, Bengal, situated in $20^{\circ} 30' N.$ and $86^{\circ} 25' E.$ Population (1901), 15,245. Its position on the Kendrāpāra Canal in the heart of a rich rice-producing country gives it a considerable trade; and it is connected by road with Cuttack, Jājpur, and Chāndbāli. It was constituted a municipality in 1869. The income and expenditure during the decade ending 1901-2 averaged Rs. 8,000. In 1903-4 the income was Rs. 11,200, of which Rs. 6,700 was derived from a tax on persons (or property tax); and the expenditure was Rs. 11,100. Besides the usual public buildings, Kendrāpāra possesses a good school and dispensary, and a public library has lately been opened for the circulation of English and vernacular literature. The sub-jail has accommodation for 12 prisoners.

Mahāvinyaka.—Sacred peak of the Bārunībunta hills in the Jājpur subdivision of Cuttack District, Bengal, situated in $20^{\circ} 42' N.$ and $86^{\circ} 6' E.$, and visible from Cuttack city. It has been consecrated during ages to Siva worship by ascetics and pilgrims who penetrated the surrounding jungles, braving the wild Savaras and other forest tribes. The Vaishnavas, in later times, have built a monastery on the northern slope of the hill. A massive piece of rock, 12 feet in circumference, still bears the name of Mahāvinyaka, the great Ganesh or Vināyaka, from its resemblance to the elephant-headed god. The right face of the rock is considered to be his father Siva; the left face has a knot over it, fancied to represent the bound-up tresses of his mother, Gaurī or Pārvatī. The rock is accordingly worshipped as the union of Siva, Gaurī, and Ganesh. A waterfall 30 feet higher up supplies the temple and its pilgrims. On the south side of the hill are the ruins of a fort known as Teligarh; the walls and inner rooms are of laterite and the doorways of gneiss.

Naltigiri.—Spur of the Assia range in the head-quarters subdivision of Cuttack District, Bengal, situated in $20^{\circ} 35' N.$ and $86^{\circ} 15' E.$, on the south of the Birūpā river. The hill has two peaks of unequal height, with a pass between. It is famous for its Buddhist remains, some of which are in a fair state of preservation.

Palmyras Point.—Headland in the Kendrāpāra subdivision of Cuttack District, Bengal, situated in $20^{\circ} 46' N.$ and $86^{\circ} 59' E.$, and constituting a landmark for vessels making for the Hooghly from the south.

Ratnāgiri.—Small hill in the Jāipur subdivision of Cuttack District, Bengal, situated in $20^{\circ} 39' N.$ and $86^{\circ} 20' E.$, on the north bank of the Keluo river. On the top is a modern temple of Mahākāla, near the gate of which are fine stone images 1 to $3\frac{1}{2}$ feet high, probably of Tantric origin. On the east several elaborately carved images have been dug up and erected. Farther east is a colossal sculpture, consisting of a male figure sitting on a lotus, below which are three rows of figures. Two enormous heads of Buddha, with thick lips and flat noses, have been dug up, and there can be little doubt that other images of great antiquarian interest are still lying buried. Local tradition ascribes these monuments to Vasukalpa Kesari, the king who is said to have built the monuments on Naltigiri hill.

Udayagiri ('Sunrise hill').—One of the peaks of the Assia range in the Jāipur subdivision of Cuttack District, Bengal, situated in $20^{\circ} 39' N.$ and $86^{\circ} 15' E.$, so called from its being the most easterly of the hills in the District. The hill is in the form of an amphitheatre, and in the centre are some Buddhist remains. Here stood a temple consisting of three parts: a sanctuary containing a colossal image of Buddha in a sitting and meditative posture, a porch now in ruins, and a brick wall encircling the temple with a gate facing the east. The image, which is now buried up to the breast, seems with the pedestal to be about 10 feet high. North of the temple are two well-carved images of Bodhisattvas, and farther north two more images of Bodhisattvas have recently been found. To the west of the temple is a well; and at the entrance to the amphitheatre is a large image of the two-handed Padmapāni Bodhisattva, cut out of a single gneiss slab standing on a pedestal, in all about 8 feet high.

Balasore District.—Northern District of the Orissa Division of Bengal, situated between $20^{\circ} 44'$ and $21^{\circ} 57' N.$ and

86° 16' and 87° 31' E., with an area of 2,085¹ square miles. The District of Midnapore bounds it on the north-east; the wooded hills of the Tributary States of Mayūrbhanj, Nīlgiri, and Keonjhar lie along the northern and western flank, and on the south the Baitaranī river marks the boundary of Cuttack. The Bay of Bengal forms the eastern boundary.

Balasore District consists of a strip of alluvial land lying between the sea and the hills which rise from the western boundary. This strip varies in breadth from about 30 miles at the north-east extremity to 10 miles at the narrowest or central portion and 40 miles in the south. Along the coast is a belt of land about 3 miles broad, which is impregnated with salt and unfit for cultivation. The western portion which runs along the foot of the hills is jungly and uncultivable. Between these two extremes lies the fertile arable country which constitutes the greater part of the District. It is watered, proceeding from north to south, by the river systems of the Subarnarekhā, Hāskurā, Sārathā, Pānchpāra, Burhābalang, Kānsbāns, Sālandī, and Baitaranī. The Subarnarekhā, which rises in Chotā Nāgpur, pursues a winding course of about 60 miles in this District. It communicates with the Coast Canal at Jāmkundā lock, and is largely used by country boats from Calcutta. The Hāskurā is a hill stream which rises in Mayūrbhanj; it contains very little water in the hot season, but during the rains it receives and carries away a great portion of the Subarnarekhā floods. The Sārathā runs a course parallel to the Hāskurā. The Pānchpāra is formed by the confluence of several hill streams from Mayūrbhanj, the principal being the Bāns, Jāmīra, and Bhairīngī, which unite, bifurcate, and reunite in the wildest confusion. The tide runs up only 10 miles; and although the interlacings constantly spread into open swamps, yet one of them, the Bāns, is deep enough at certain parts of its course for boats of 4 tons burden. The Burhābalang, on which Balasore town is situated, runs a tortuous course of 35 miles; the name signifies 'The old twister.' The tide runs up 23 miles; and though sea-going steamers can no longer enter it, owing to the sand-bar across its mouth, it is navigable by brigs and sloops as far as Balasore town. The Kānsbāns, which is formed by the confluence of a number of small hill streams rising in the Tributary States, is liable to sudden freshes, and eventually reaches the sea by two mouths, the lower of which is called the Gamai, while the

¹ The area shown in the *Census Report* of 1901 was 2,059 square miles; that given above is taken from figures supplied by the Surveyor-General.

northern retains its original name. The Baitaranī, which rises in Keonjhar State, forms the boundary between Balasore and Cuttack. After its junction with the Brāhmanī, the united stream flows into the Bay of Bengal under the name of the Dhāmra. The river is navigable as far as Olokh, 15 miles from the mouth; beyond this point it is not affected by the tide and becomes fordable during the hot season. It receives two tributaries on the Balasore bank—the Sālandī and the Matai. A large weir has been constructed across the Baitaranī at Akshayāpadā, to dam the water during the dry season for the supply of the portion of the High-level canal between Akshayāpadā and Bhadrakh.

Geology. The Nilgiri hills consist of granitoid gneiss, interfoliated with which are occasionally found bands of a chloritic rock approaching serpentine in texture. This rock yields a beautiful, compact, and very tough material, which is at the same time soft and easy to work. A few miles west and south-west of Jugjhuri the rocks alter considerably and assume a hard, tough, indistinctly crystallized hornblendic character. Still farther to the south-west and near the Sālandī river well-foliated quartz schist comes in. Laterite in a compact form occurs along the base of the Nilgiri hills¹.

Botany Along the coast as far north as the Burhābalang river are large grassy plains, with occasional sparse patches of cultivation and low jungle on the sand ridges and near the tidal streams. North of the Burhābalang, especially round the mouth of the Hāskurā and Subarnarekhā, are numerous tidal creeks fringed with heavy jungle. The cultivated land has the usual rice-field weeds, while ponds and ditches are filled with floating water-weeds or submerged water-plants. Near human habitations shrubberies of semi-spontaneous shrubs are common, and are loaded with a tangled mass of climbing *Convolvulaceae*. The arborescent portion of these village shrubberies includes the red cotton-tree (*Bombax malabaricum*), *jīyal* (*Odina Wodier*), *Tamarindus indica*, *Moringa pterygosperma*, *pīpal* (*Ficus religiosa*), banyan (*Ficus bengalensis*), and the palms *Borassus flabellifer* and *khajūr* (*Phoenix sylvestris*). There are no forests; but in the west of the District, where the boundary approaches the hills and the lands are higher, patches of jungle occur, including a little *sāl* (*Shorea robusta*), which rarely attains to any size. The usual bamboo is *Bambusa*

¹ 'The Geological Structure and Physical Features of the Districts of Bānkurā, Midnapore, and Orissa,' *Memoirs, Geological Survey of India*, vol. i, pt. III.

arundinacea. Open glades are filled with grasses, sometimes of a reedy character. Sedges abound, and ferns are fairly plentiful.

Black bears are found in the north, and tigers, leopards, Fauna. hyenas, spotted deer, antelope, hog deer, mouse deer, civet cats, and hares are common in the more jungly portions of the District.

Balasore is directly on the track of the cyclonic storms which frequently cross Orissa during the monsoon season, and the extremes of climate are more marked than in most parts of Bengal. In April and May the average maximum temperature is 98°. The mean temperature falls from 89° in the hot months to 83° in the monsoon and to 74° in February. Dry westerly winds often blow during the hot season, and these are followed by well-marked south-west monsoon conditions; the humidity thus ranges from 79 per cent. in April and May to 89 per cent. in August. The annual rainfall averages 60 inches, of which 5.1 inches fall in May, 9.0 in June, 12.1 in July, 11.5 in August, 11.2 in September, and 5.1 in October. Climate, temperature, and rainfall.

The District is subject to floods, due to the sudden rising of the rivers in the hills. Protective embankments have been built, the principal being the Bhograi and Salsā Pāt on the lower reaches of the Subarnarekhā; but the protection afforded by them is far from complete. An exceptionally high flood occurred in 1868; and there were floods of inferior height but more serious in results in 1892 and 1896, the latter causing a great loss of crops in the south of the District. Other years of high floods were 1855, 1866, 1872, 1883, 1886, 1888, 1894, 1897, and 1898. In October, 1900, the water rose 18 inches higher than in any flood previously recorded, and breached the railway line and destroyed crops and cattle, though it caused very little loss of human life. The cyclones to which Balasore is exposed are generally accompanied by irresistible storm-waves, which vary in height from 3 to 10 feet and sometimes penetrate as far as 10 miles inland. Such calamities occurred in 1823, 1831, 1832, 1848, and 1851. In the severest of these, the cyclone of 1831, 26,000 persons lost their lives. Cyclones have also occurred in 1872, 1874, and 1891; but these were not accompanied by storm-waves. Natural calamities.

The early history of Balasore presents no special features of interest beyond such as are given in the article on ORISSA. The English settlement in the District dates from 1633, when a factory was established in BALASORE TOWN; but the country History.

did not pass into the hands of the British till the acquisition of Orissa in 1803. It was created a separate District in 1828. There have been many minor changes of jurisdiction, but it is unnecessary to detail them here.

The
people.

The population enumerated in the present area increased from 770,232 in 1872 to 945,280 in 1881, 994,675 in 1891, and 1,071,197 in 1901. The great increase between 1872 and 1881 was due partly to improved enumeration, and partly to a recovery from the losses caused by the famine of 1866. The District often suffers from severe epidemics of cholera. The worst outbreak took place in 1892, when this disease was responsible for a mortality of 15 per 1,000. Elephantiasis is extremely common. Fever prevails in the cold season; but the country is singularly free from malaria, except in the Jaleswar *thāna*, which is very unhealthy.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages				
Balasore	1,155	1	2,112	592,544	513	+ 8.3	43,512
Bhadrakh	930	1	1,246	478,653	515	+ 6.9	39,974
District total	2,085	2	3,358	1,071,197	514	+ 7.7	83,486

The two towns are BALASORE, the District head-quarters, and BHADRAKH. The density of population is greatest in the Bhadrakh *thāna*, where it rises to 662 persons per square mile. The largest increase in the decade ending 1901 took place in the Chāndbāli and Bāsudebpur *thānas* in the south-east of the District, both of which contain much land fit for cultivation. Balasore sends numerous emigrants to the Twenty-four Parganas and to Calcutta, where many of them are employed as domestic servants and cooks; but otherwise there is little migration except to and from the neighbouring Districts and States. The vernacular is Oriyā. Of the total population, 1,033,166 (96.4 per cent.) are Hindus, 28,340 (2.6 per cent.) Musalmāns, and 0.8 per cent. Animists.

Castes and
occupations.

The most numerous castes are the Khandaits (211,000), originally the feudal militia of the Rājās of Orissa, Brāhmins (120,000), Gauras (74,000), and Rājus (47,000.) Gokhās (31,000) and Golās (34,000) are more numerous in this Dis-

tract than elsewhere, while other Orissa castes are Kāndras, usually day-labourers and *chaukidārs* (32,000), and Karans, the writer caste (26,000). Agriculture supports 79 per cent. of the population, industries 9.6 per cent., commerce 0.3 per cent., and the professions 1.1 per cent.

Christians number 1,274, of whom 1,110 are natives. Two Christian missions are at work, a Roman Catholic and an American Free Baptist mission. The latter, which has been in the District since 1832, has 6 stations. It maintains at Balasore a high school, an English school for European boys and girls, 5 Kindergarten lower primary schools, and a middle English school; and at other stations 2 middle English schools and one vernacular school, as well as 31 lower primary schools and one Kindergarten school. Industrial work is taught, including farming, weaving, and carpentry. The mission also possesses three orphanages, and carries on medical work on a large scale. The Roman Catholic mission is a comparatively small one; it works chiefly in the town of Balasore, where it possesses a large chapel and an orphanage for native girls.

The alluvial tract which extends through the centre of the District is fertile. The higher land on the west is for the most part rocky, but in some places where vegetable deposits occur it is very productive. Along the coast, except in years of excessive rainfall, the soil is generally infertile on account of the deposits of salt. Lands are ordinarily divided into three classes: *jalā*, or rice lands; *pāl*, or rich river-side lands growing tobacco, cotton, *rabi* crops, and the best rice; and *kālā*, the high lands of the homestead, which generally grow vegetables.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste	Irrigated from canals.
Balasore . .	1,155	735	121	...
Bhadrakh . .	930	591	98	63
Total	2,085	1,326	219	63

Chief agricultural statistics and principal crops.

Of the cultivated area, only one per cent. is estimated to be twice cropped. Rice is the principal food-grain, and includes three crops: *sārad* or winter rice, *biālī* or autumn rice, and *dālwa* or spring rice. Of these, winter rice is estimated to cover 1,025 square miles, or 77 per cent. of the whole area under cultivation. On the higher levels the crop is sown

broadcast, but in low lands the seedlings are transplanted. The sowing takes place in May or June; but the reaping seasons vary for different varieties, *āsu* being reaped in August or September, *kandā* in September or October, and *guru* from November to January. *Biālī* rice, which is sown in May and reaped in August and September, covers 168 square miles, while the area under *dāhua*, sown in November and December and reaped in March, is ordinarily very small. The other crops are of minor importance, pulses covering only 17 and oilseeds 16 square miles.

Improvements in agricultural practice. Cultivation has extended by 40 per cent. during the last seventy years, but owing to the innate conservatism of the Oriyā little improvement is visible in the methods adopted. Various experiments have been made at the instance of Government with new crops and modern implements, but these have not found favour with the ryots. Little advantage has been taken of the Land Improvement Loans Act, but useful work has been done under the Agriculturists' Loans Act, particularly in times of distress following floods.

Cattle The cattle are similar to those common in South Bengal. Fodder is scarce in the centre of the District, but extensive pasture lands along the coast and the higher land in the west afford good grazing.

Irrigation. The only irrigation system is that provided by the High-level Canal, which has within the District a length of 19 miles, in addition to 50 miles of distributaries. It commands 90 square miles, of which 69 square miles are actually provided with means for irrigation. The area irrigated in 1903-4 was 63 square miles. In addition to this, water from the rivers is utilized in order to irrigate the crops near their banks.

Minerals. Laterite is found along the west of the District, and is used for building; the honeycombed variety was largely used in former times for temples. Chlorite is also obtained from the hills in the western border, and is the material from which all ancient statues and idols were carved; at the present time it is used for the manufacture of plates and bowls.

Manufactures. Cotton-weaving and mat-making are carried on, and brass and bell-metal articles are manufactured.

Commerce. The chief imports are European cotton piece-goods, oil, salt, and spices; the principal export is rice, which in favourable seasons is dispatched in enormous quantities by sea, canal, and rail. Other exports are hides, jute, oilseeds, timber, and stone-ware. Rice is shipped to Ceylon and Mauritius, but otherwise trade is carried on chiefly with Calcutta and Madras. Balasore

and Chāndbāli are the chief centres of the seaborne trade, other places of trade being Māndhātā on the Coast Canal, Bāliāpāl on the Matai river, and Bārabātīa on the Guchidā river, a tributary of the Subarnarekhā. A great deal of the rice exported was formerly carried by native coasting vessels, but the silting up of several of the smaller ports and the opening of the Coast Canal and the railway have recently caused a great decline in the volume of this trade. The imports which passed through the ports of Chāndbāli and Balasore in 1903-4 were valued at 28.9 lakhs and the exports at 25.7 lakhs, but these figures include a large amount of trade from Cuttack District.

The Bengal-Nāgpur Railway runs for 88 miles through the District, connecting it with Calcutta, Cuttack, and Madras. A branch line, called the Mayūrbhanj State Railway, from Rupsā junction to Baripādā in the State of Mayūrbhanj, was opened in 1904. A survey for a branch from Balasore to Chandīpur on the coast is being made, and a light tramway from Balasore to tap the Nilgiri stone quarries is contemplated.

The trunk road affords communication with Midnapore and Calcutta on the north, and with Cuttack, Purī, and Ganjām on the south. Apart from this road (95 miles), which is metalled and maintained from Provincial funds, 41 miles of metalled and 268 miles of unmetalled roads, and 106 miles of village tracks, are maintained by the District board. The most important are those from Bhadrakh to Chāndbāli, from Balasore to Mitrapur in the Nilgiri State, from Kamardā to Bāliāpāl, from Bāliāpāl to Bastā, from Kamardā to Jaleswar, and from Singlā to Nangaleswar.

For purposes of navigation the most important rivers are the Subarnarekhā, the Burhābalang, on which Balasore town is situated, the Dhāmra and Baitaranī, which connect Chāndbāli with the sea, and the Sālandī, on which Bhadrakh lies. The Coast Canal, which connects the Hooghly at Geonkhāli with the Matai at Chāribātīa, has a length of 71 miles within the District; it was completed in 1887, but has not been a financial success. The High-level Canal has a course of 19 miles within this District; it is navigable, but has been little used for traffic since the opening of the railway. The Public Works department also maintains 46½ miles of protective embankments. A canal connecting the old port of Churāman with the Matai river has fallen into disrepair. A bi-weekly steamer service runs between Chāndbāli and Calcutta. Balasore contains eighteen ferries under the control

Water
communi-
cations.

of the District board, the most important being those where the trunk road crosses the Subarnarekhā and Burhābalang rivers.

Famine Balasore suffered grievously in the great Orissa famine of 1865-6. The rainfall of 1865 was scanty and ceased entirely after the middle of September, so that the out-turn of the winter rice crop on which the country depends was only one-third of the average. Stocks were moreover dangerously depleted, as unusually large quantities of grain had been exported. By November distress had begun to be acute, and in February, 1866, starvation appeared and relief operations were commenced; but the works were to a great extent rendered inoperative for want of rice to feed the labourers. By the month of April even the well-to-do peasants had only a single scanty meal a day, while the poorer classes eked out their subsistence with roots, herbs, and leaves. Government succeeded in importing about 12,000 maunds of rice by the end of July, but the monsoon had begun and importation on any large scale was impossible. Orissa was at that time almost isolated from the rest of India. The mortality reached its culminating point in August, when heavy rains caused great suffering among the people, who were then at the lowest stage of exhaustion, emaciated by hunger, and without sufficient shelter. Disastrous floods in the south-east of the District followed these rains; 83,000 acres were inundated, and in all the low-lying lands the crop was lost. The harvest in the higher lands was, however, a good one, the new crop came into the market in September; and though the rate of mortality continued high for some time owing to cholera, the famine came to a close in November. During the year the price of rice rose as high as $2\frac{1}{2}$ seers per rupee, and in the town of Balasore alone 10,000 paupers succumbed to starvation and disease. The total mortality was estimated at 217,608, 31,424 deaths being ascribed to diseases resulting from starvation; 29,558 persons emigrated; and the total loss was, therefore, 247,166, or one-third of the population. The daily average of persons relieved from June to November, 1866, amounted to 26,497; out of this number, 21,945 received gratuitous relief and 4,552 were employed on light work. The total expenditure on relief works from May to November, 1866, amounted to Rs. 73,356.

In 1896 the out-turn of rice was estimated at barely half of a normal crop; but though there was considerable local distress, very little relief was found necessary beyond such as was afforded by the facilities for obtaining earthwork on the railway.

For administrative purposes the District is divided into two subdivisions, with head-quarters at BALASORE and BHADRAKH. The Magistrate-Collector is assisted at Balasore town by three Deputy-Magistrate-Collectors. The subdivisional officer of Bhadrakh, who is often a member of the Indian Civil Service, has a Sub-Deputy-Collector subordinate to him. The Executive Engineer of the Balasore division is stationed at Balasore, and the Port Officer of the Cuttack and Balasore ports at Chāndbālī.

District
subdivi-
sions and
staff.

For the disposal of civil judicial work, two Munsifs sit at Balasore and Bhadrakh, subordinate to the District and Sessions Judge, who is also Judge of Cuttack and Purī. The criminal courts include those of the District and Sessions Judge, the District Magistrate, three Deputy-Magistrates, the subdivisional officer of Bhadrakh, the Sub-Deputy-Collector of Bhadrakh, and the Port Officer of Balasore port. The District Magistrate is *ex-officio* Assistant to the Superintendent of the Orissa Tributary Mahāls, in which capacity he exercises the powers of a Sessions Judge in Nīlgiri, Mayūrbhanj, and Keonjhar. The District is singularly free from serious crime, and the majority of cases are of a petty character.

Civil and
criminal
justice.

The early Hindu rulers of Orissa recognized no middlemen between them and their subjects, but the residents of each village paid their quota through a headman (*padhān*). The villages were grouped into large divisions (*khand* or *bisī*) of 10 to 50 square miles, the prototypes of the later Muhammadan *parganas*; over each division was an executive officer (*khandpātī*), who acted as the representative of the sovereign, and with the assistance of the divisional accountant (*bhoimūl* or *bishayī*) collected the revenue and handed it over to the head of the district (*desādhipātī*). The first regular settlement was begun in 1580 by Akbar's finance minister, Todar Mal. In the central and most highly cultivated part of Balasore he made a detailed settlement, fixing the rates of rent in every village. He confirmed in possession the hereditary under-officials, the *khandpātīs* and *bhoimūls* becoming *chaudhris* and *kānūngos*, and being entrusted with the collection of revenue and the other rights and liabilities of *zamīndārs* for the area under their direct management. The village headmen he maintained under the appellation of *mukaddam*; where there were no hereditary headmen or where the *padhān* had been dispossessed, collections were often made through an agent (*karjī*) or farmer (*sarbarāhkār* or *mustājir*) appointed by the *talukdār*, and many of these developed into hereditary tenure-

Land
revenue.

holders with rights almost equal to those of *mukaddams*. The Marāthās made no change in the character of the fiscal organization, and the above-mentioned tenures represent the most important of those found by the British Commissioners in 1803. A settlement made in 1834-5 should have expired in 1867 but was extended till 1897, when a new settlement was introduced for a term of thirty years, which will expire in 1927. The revenue demand was raised from 3.85 to 6.28 lakhs. In 1903-4 the total current demand was 6.50 lakhs, of which 5.82 lakhs was payable by 1,463 temporarily settled estates, Rs. 42,000 by 152 permanently settled estates, and Rs. 26,000 by 14 estates held direct by Government. The average incidence of total land revenue was 11 $\frac{2}{3}$ annas per cultivated acre. At the recent settlement the average area held by each ryot was found to be 5.48 acres, and the rates of rent ranged between Rs. 3-8-3 and R. 0-11-5 per acre, the average being Rs. 1-12-11.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	4,11	4,21	6,25	6,55
Total revenue . .	6,69	7,53	10,98	11,21

Local and municipal government. Outside the municipality of BALASORE, local affairs are managed by the District board, to which subdivisional local boards are subordinate. In 1903-4 its income was Rs. 1,05,000, of which Rs. 36,000 was obtained from rates; and the expenditure was Rs. 96,000, including Rs. 43,000 spent on public works and Rs. 32,000 on education.

Police and jails. The District contains 9 police stations and 13 outposts. The force subordinate to the District Superintendent consists of 2 inspectors, 28 sub-inspectors, 25 head constables, and 331 constables. In addition, there is a rural police force of 140 *daffadārs* and 1,538 *chaukidārs*. The District jail at Balasore has accommodation for 163 prisoners, and a subsidiary jail at Bhadrakh for 14.

Education. Of the population in 1901, 7.8 per cent. (15.7 males and 0.4 females) could read and write. The number of pupils under instruction increased from 22,737 in 1880-1 to 37,140 in 1892-3, but fell to 35,375 in 1900-1. In 1903-4, 30,034 boys and 4,447 girls were at school, being respectively 38.6 and 5.3 per cent. of the children of school-going age. The

number of educational institutions, public and private, in that year, was 1,671: namely, 34 secondary, 1,535 primary, and 102 special schools. The expenditure on education was Rs. 1,47,000, of which Rs. 17,000 was met from Provincial revenues, Rs. 31,000 from District funds, Rs. 1,300 from municipal funds, and Rs. 71,000 from fees. The chief schools are the Government and Baptist Mission high schools at Balasore; other special institutions are an industrial school at Alālpur, a *madrassa* at Dhamnagar, and eight schools for depressed tribes and castes.

In 1903 the District contained 11 dispensaries, of which Medical. 3 had accommodation for 71 in-patients. The cases of 43,000 out-patients and 600 in-patients were treated, and 1,700 operations were performed. The expenditure was Rs. 16,000, of which Rs. 600 was met from Government contributions, Rs. 6,000 from Local and Rs. 1,200 from municipal funds, and Rs. 3,000 from subscriptions.

The mortality from small-pox is comparatively high. Vaccination is compulsory only in Balasore municipality; but the population is not averse to vaccination, and 24,000 persons, or 23.2 per 1,000 of the population, were successfully vaccinated in 1903-4.

[Sir W. W. Hunter, *Orissa* (1872), and *Statistical Account of Bengal*, vol. xviii (1877); S. L. Maddox, *Final Report on the Survey and Settlement of Orissa* (Calcutta, 1900).]

Balasore Subdivision.—Head-quarters subdivision of Balasore District, Bengal, lying between $21^{\circ} 4'$ and $21^{\circ} 57' N.$ and $86^{\circ} 21'$ and $87^{\circ} 31' E.$, with an area of 1,155 square miles. The subdivision consists of a narrow strip of alluvial soil, shut in by the Bay of Bengal on the east and by the hilly country of the Garhjāts on the west. The population in 1901 was 592,544, compared with 546,893 in 1891, the density being 513 persons per square mile. It contains one town, BALASORE (population, 20,880), the head-quarters; and 2,112 villages. After Balasore, BĀLIĀPĀL is the chief centre of trade. A large fair is held annually at REMUNA.

Bhadrakh Subdivision.—Southern subdivision of Balasore District, Bengal, lying between $20^{\circ} 44'$ and $21^{\circ} 15' N.$ and $86^{\circ} 16'$ and $86^{\circ} 58' E.$, with an area of 930 square miles. The subdivision is a fertile deltaic tract, watered by numerous streams which flow from the Chota Nāgpur plateau into the Bay of Bengal. The population in 1901 was 478,653, compared with 447,782 in 1891, the density being 515 persons per square mile. It contains one town, BHADRAKH (population, 18,518),

the head-quarters; and 1,246 villages. A large trade passes through CHĀNDBĀLI port in the south of the subdivision.

Balasore Town.—Head-quarters of the District and subdivision of the same name, Bengal, situated in $21^{\circ} 30' N.$ and $86^{\circ} 56' E.$, on the right bank of the Burhābalang river, about 15 miles from its mouth, though only 6 miles in a direct line from the sea. Population (1901), 20,880, of whom 16,671 were Hindus, 3,688 Muhammadans, and 510 Christians. The name is probably derived from the temple of Mahādeo Bāneswar, which is still standing, and was so called after Bānasura, its traditional founder.

Balasore was the first place occupied by the English in Bengal. It owed its importance not so much to its convenience for trade with Orissa as to the safety of its roadstead, near the mouth of the Ganges, which enabled sea-going ships to unload their cargoes into smaller vessels for transport up the Hooghly. The earliest mention of the name in the English records is in 1633, when a party of factors, who had reached Orissa on a voyage from Masulipatam, received permission from the local governor to trade at Balasore; but the factory does not seem to have been permanently established until 1651. The staff usually consisted of a chief and four other factors, subordinate to the agency at Hooghly. The most interesting event in its history is connected with the war between the English Company and Aurangzeb. In 1687, when Job Charnock was driven out of Hooghly, he avenged himself by sacking Balasore; and a similar exploit was repeated in the following year by Captain Heath, who had been sent out in command of a fleet from England. The importance of Balasore declined as the navigation of the Hooghly became more familiar to European pilots, while its local trade was affected by the Marāthā invasion of Orissa, and also by the silting up of the channel of the Burhābalang river. During the eighteenth century it was regarded as a seaside health resort for the inhabitants of Calcutta. Governor Drake himself was there in 1756 when the trouble with Sirāj-ud-Daula first began. After the fall of Fort William, the factors at Balasore safely withdrew and joined the fugitives at Falta; but the little sub-factory of Balrāmgarhi (or Balrāmgachi) at the mouth of the Burhābalang river was never abandoned, and had the honour of being formally proclaimed the seat of the Presidency. In 1803, when Orissa was conquered from the Marāthās, Balasore was occupied, with trifling opposition, by a small force sent by sea from Calcutta.

The French, Dutch, and Danes also possessed settlements at Balasore. The two latter, known as *Ulanshāhi* (Hollandais-shāhi) and *Denamārdānga*, were ceded to the British in 1846. The French settlement or *loge*, known as *Farāsdānga*, was never ceded; it is subject to the authority of the Administrator at Chandernagore. The lease of the territory, which is only 38 acres in area, is disposed of annually by auction.

Balasore lost a great deal of its importance when Government abandoned the monopoly of the salt manufacture and trade in 1863; but the port still possesses a large trade, and is in charge of the Port Officer at Chāndbāli. The principal exports are rice and stoneware quarried chiefly in the Nīlgiri hills; and the principal imports are cotton twist, European cotton piece-goods, kerosene oil, and salt.

Balasore was constituted a municipality in 1877. Though it includes an extensive bazar, the town is in reality little more than a collection of hamlets, the area within municipal limits being 5 square miles. The income during the decade ending 1901-2 averaged Rs. 18,000, and the expenditure Rs. 17,000. In 1903-4 the income was Rs. 18,000, of which Rs. 8,000 was derived from a tax on persons (or property tax); and the expenditure was Rs. 16,000. The chief buildings are the usual public offices, the District jail, the general hospital, and a charitable dispensary, while the railway bridge over the Burhābalang is an imposing structure. The jail has accommodation for 163 prisoners, who are employed on oil-pressing, weaving of coarse cloths and carpets, and cane and bamboo work. The chief educational institutions are the Government high school and a high school maintained by the American Free Baptist Mission.

Baliāpal.—Village in the head-quarters subdivision of Balasore District, Bengal, situated in $21^{\circ} 39'$ N. and $87^{\circ} 17'$ E., on the Matai river. Population (1901), 298. Rice to the annual value of a lakh of rupees is exported in sloops to Calcutta, Madras, and the Laccadives.

Bhadrakh Town.—Head-quarters of the subdivision of the same name in Balasore District, Bengal, situated in $21^{\circ} 3'$ N. and $86^{\circ} 31'$ E., on the banks of the Sālandī at the 43rd mile of the trunk road beyond Balasore town. Population (1901), 18,518. The town derived its name from the goddess Bhadrakālī, whose temple stands near the river. It consists of a group of hamlets covering about 3 square miles, and is divided into two quarters, the Nayābazar on the right bank of the Sālandī and the Purānabazar on the left, the latter

being the chief centre of trade. The principal articles of commerce are rice, salt, kerosene oil, cotton, cattle, and hides. The town contains the usual subdivisional offices; the sub-jail has accommodation for 14 prisoners.

Chāndbāli.—Port in the Bhadrakh subdivision of Balasore District, Bengal, situated in $20^{\circ} 47' N.$ and $80^{\circ} 45' E.$, on the left bank of the Baitaranī river, 8 miles west of its confluence with the Brāhmanī, and 20 miles from its mouth. Population (1901), 1,826. It is connected with the interior by the Matai, the Bhadrakh road, and various tidal creeks. The importance of the port has decreased owing to the opening of the Bengal-Nāgpur Railway, but it still possesses a large trade, which is supervised by a Port Officer. The sole export of importance is rice; the chief imports are cotton twist, piece-goods, kerosene oil, salt, spices, and gunny-bags.

Chandīpur.—Village in the head-quarters subdivision of Balasore District, Bengal, situated in $21^{\circ} 27' N.$ and $87^{\circ} 2' E.$, on the sea-coast, about 9 miles east of Balasore town, and near the mouth of the Burhābalang river. Population (1901), 627. The Ordnance Proof department has a sea-range here where cannon are tested. The department has also a magazine and all necessary instruments at Chandīpur. Since the railway has brought Balasore within easy reach of Calcutta, there has been an influx of visitors who come to enjoy the sea-breezes at Chandīpur, and the place possesses possibilities as a health resort; there is a long level beach, and sea-bathing is possible owing to the absence of surf. A branch line of the Bengal-Nāgpur Railway to connect Chandīpur with Balasore has been projected. Large quantities of excellent fish are caught here, which are carried by coolies to Balasore and thence railed to Calcutta.

Jaleswar (or Jellasore).—Village in the head-quarters subdivision of Balasore District, Bengal, situated in $21^{\circ} 49' N.$ and $87^{\circ} 13' E.$, on the left bank of the Subarnarekhā, 12 miles from its mouth. It lies on the Calcutta high road, and is also a station (Jellasore) on the Bengal-Nāgpur Railway. It was formerly the capital of a Muhammadan *sarkār* comprising the present District of Midnapore. During the eighteenth century the East India Company had a factory here.

Remuna.—Village in the head-quarters subdivision of Balasore District, Bengal, situated in $21^{\circ} 33' N.$ and $86^{\circ} 53' E.$, about 5 miles west of Balasore town. Population (1901), 1,430. It is celebrated for the temple of the god Kshīrchorā Gopīnāth, a form of Krishna, in honour of whom a religious

fair is held annually in February. The fair lasts for thirteen days and is attended by a very large number of pilgrims. Toys, sweetmeats, fruits, vegetables, country cloth, and other articles are sold. The temple of the god is an unsightly stone edifice, disfigured by indecent sculptures.

Angul District.—District lying among the Tributary States in the south-west of the Orissa Division, Bengal, between $20^{\circ} 13'$ and $21^{\circ} 10'$ N. and $83^{\circ} 50'$ and $85^{\circ} 43'$ E., with an area of 1,681 square miles. The District comprises two detached subdivisions, known as Angul and the Khondmāls, with different physical and ethnical characteristics. The former, or head-quarters subdivision, is bounded on the north by Rairākhhol and Bāmra States; on the east by Tālcher, Dhenkānāl, and Hindol; on the south by Daspallā and Narsinghpur; and on the west by Athmallik State. The Khondmāls or Kandhmāls, the hills inhabited by the Khond or Kandh tribe, lie to the south-west of Angul, and form an *enclave* of the Baud Tributary State, which bounds them on the north, east, and west; on the south the boundary marches with the Ganjām District of Madras.

Boun-
daries, con-
figuration,
and hill
and river
systems.

The Angul subdivision has the general characteristics of this part of Orissa, low wooded hills enclosing cultivated valleys intersected by numerous watercourses which run dry in the summer. The south is hilly, forming an outlying chain of the Sātpurā range; the line of hills, running from south-west to north-east, is the watershed between the Mahānadī river on the south and the Brāhmanī on the north. The scenery in the hills is picturesque, the Mahānadī threading its way between precipitous hills clothed in dense forest before it debouches on the plains below.

The Khondmāls form a broken plateau, about 1,700 feet in height, intersected by circular ranges of hills. Heavy forest still covers much of this tract, and the cultivated lands lie in scattered clearings on the hill-sides and in the valleys below. A range of hills, 3,000 to 3,300 feet in height, separating the Khondmāls from Ganjām, forms the Southern limit of the watershed of the Mahānadī.

The Mahānadī, which rises in the Central Provinces, forms the boundary between Angul on the north and the Baud and Daspallā Tributary States on the south. On its left bank it receives the drainage of south Angul, the principal tributary being the Barajorā; and on its right bank the Tel, Mārini, and Jormu in Baud, and the Bāghnadī, Sālki, and Hirāmānanda, which drain the Khondmāls. Some 40 miles farther

north and parallel to the Mahānadi flows the Brāhmanī, which passes just outside the northern boundary of Angul and receives most of its drainage by the Tikrā, Nandir Jhor, and Nigrā.

- Geology.** The District is formed partly of gneissic rocks, and partly of sandstones, conglomerates, and shales referable to the Gondwāna system.
- Botany.** Extensive forests clothe the hills and valleys; the *sāl* (*Shorea robusta*) is the principal constituent, and bamboos are plentiful. Other trees are *Anogeissus latifolia*, *Lagerstroemia parviflora*, *Albizzia*, *Adina cordifolia*, *Ougeinia dalbergioides*, *Sterculia urens*, *Phyllanthus*, *Diospyros*, *Pterocarpus Marsupium*, and *Dalbergia latifolia*.
- Fauna.** These forests harbour wild animals of all kinds. There are wild elephants and bison in their deeper recesses; tigers, leopards, deer, hog, and wild dogs in the lighter jungle, and bears on all the hills. The yearly loss in human lives and cattle and the damage to crops from the depredations of wild animals is enormous.
- Climate and rainfall.** The climate is unhealthy, especially in the Khondmāls, where malaria is notoriously prevalent, and the sudden changes of temperature are very trying. The rainfall is uncertain and unevenly distributed. The annual fall for the District averages 53 inches, of which 9·8 inches fall in June, 12·2 in July, 10·5 in August, 9·6 in September, and 4·3 in October.
- History.** Angul, in common with the rest of the Hill Tracts of Orissa, was at one time inhabited by aboriginal Khonds, who at an early date were driven back into the rocky fastnesses of the Khondmāls by successive waves of Hindu immigrants. Many centuries ago the numerous loosely formed States and principalities of the Hill Tracts of Orissa fell into the hands of Rājput adventurers, who had probably come to make the pilgrimage to Purī, and found the country an easy prey. The earlier rulers were often at feud with one another; and it was easy to provoke a quarrel here, or stir up an intrigue, there, and then take advantage of the dissension to seize the chief's fortress, the possession of which in those days meant the government of the State. There is no record of these different conquests; but gradually all the Hill States of Orissa, Angul among the number, came under rulers who were or claimed to be Rājputs. Angul had the same history as its neighbours, at one time warring successfully and gaining a few villages, at another time warring unsuccessfully and losing a few; and while in the Orissa delta in these early times a great

civilization waxed and waned, the Hill Tracts remained practically barbarous and untouched by outside influences. The old chiefs all acknowledged allegiance to the Purī Rājā; and, when the East India Company took over the territories, the hill Rājās received *sanads* and agreed to pay tribute, Angul's annual contribution being fixed at Rs. 1,650. In 1846 the Rājā was one Somnāth Singh, who early acquired an evil reputation as an oppressor among his own people and a filibuster among his neighbours. The friction between him and the Government originated in the Khondmāls, where he assisted rebellions of the Khonds in 1846 and 1847. In the latter year, moreover, a body of *paiks* from Angul crossed the Mahānadi and destroyed two villages belonging to the Rājā of Daspallā. The Rājā of Angul was summoned to Cuttack to explain his conduct, but he refused to come; and in December, 1847, Government issued a proclamation annexing Angul, and a force of three regiments of infantry, a battery of artillery, and a squadron of irregular cavalry invaded the country from Ganjām, in co-operation with a smaller force from the Central Provinces. The country was occupied practically without a blow, and the Rājā was imprisoned for life at Hazāribāgh. Angul was administered by a *tahsildār* (or revenue collector) under the Superintendent of the Orissa Tributary Mahāls until 1891, when it was made a separate District, the Khondmāls being added to it.

The Khondmāls were originally a part of the Baud Tributary State; but the Khonds were practically independent, and the Rājā was quite unable to control them. Matters came to a climax when the British Government determined to put down the practice of human sacrifice among the Khonds. In 1835 the Rājā of Baud agreed to make over the tract occupied by them. It was at first administered by the Madras Government, which had created a special Agency for the purpose of suppressing human sacrifice among the Khonds across the Ganjām border. The Baud Khonds gave considerable trouble before their sacrifices were finally suppressed, and a formidable rising took place in 1847. They finally settled down, however, and in 1855 the administration of their country was transferred to Cuttack. A *tahsildār* held charge of the tract until 1891, when it was formed into a subdivision of Angul District.

The population of Angul, including the Khondmāls, increased from 130,184 in 1872 to 160,861 in 1881, 170,058 people in 1891, and 191,911 in 1901.

The principal statistics of the Census of 1901 are shown in the following table :—

Subdivision.	Area in square miles	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Angul . .	881	...	453	127,697	145	+ 23 1	3,539
Khondmāls .	800	.	996	64,214	80	- 3.2	301
District total	1,681	...	1,449	191,911	114	+ 12 8	3,840

Only one of the villages, ANGUL, the head-quarters, has more than 2,000 inhabitants. The decrease in the Khondmāls during the decade ending 1901 was due to the prevalence of cholera and other diseases, and to short crops in 1896 and 1899 which stimulated emigration. Angul attracts numerous settlers from the neighbouring States. Oriyā is spoken by 77 per cent. and Khond or Kuī by 22 per cent. of the population; the latter is a Dravidian language allied to Telugu, and is the tribal dialect of the Khonds, most of whom still speak it. Animists, nearly all of whom are Khonds, number 42,710, or 22 per cent. of the total population; the remainder are nearly all Hindus (148,799). Christians number only 33, of whom 24 are natives.

Castes and occupations.

The Khonds (48,000) are the most numerous caste; and they survive in the KHONDMĀLS as a distinct nationality, with a history, a religion, a language, and a system of law and landed property of their own. They first came into prominence in the early part of the nineteenth century, owing to the human sacrifices enjoined by their religion as a propitiatory offering to the earth-goddess, the flesh of the victims being buried in the fields to ensure good crops. The victims, or *meriahs* as they were called, were purchased; and the duty of providing them rested with a semi-aboriginal tribe called Pāns, who are attached to every Khond village. These human sacrifices were suppressed with difficulty by the British Government, as described in the paragraph on History. The Chāsas (41,000), the great cultivating caste of Orissa, are largely of non-Aryan descent. The Gaurs (13,000) are cattle-herds. The Pāns (29,000) are weavers and notorious thieves. Agriculture supports 76 per cent., industry 15 per cent., and commerce 1 per cent. of the population.

Angul is a fairly open country and well watered, but the

Khondmāls are a high mountainous plateau containing little level land. The Khonds largely follow the nomadic system of cultivation, cutting and burning the forest in the dry season, and dibbling in the seeds when the rains break. At first such lands are abandoned after a year or two; but as the population increases this practice is modified and the slopes are more regularly tilled, until eventually they are ploughed year after year without intermission.

The chief agricultural statistics for 1903-4 are shown below, in square miles :—

Chief agricultural statistics and principal crops.

Subdivision.	Total.	Cultivated	Cultivable waste.	Forests.
Angul	881	251	21	629
Khondmāls	800	197	80	500
Total	1,681	448	101	1,129

The principal crop is rice, which covers nearly half the cultivated area; it is grown chiefly in the Angul subdivision. In the Khondmāls the area of embanked rice land is comparatively small; most of the best lands are cultivated by Oriyās, but the Khonds also grow some rice on the uplands and hill slopes. The crop which the Khonds chiefly affect, however, is turmeric, which is extensively grown for export. They also cultivate millets, pulses, maize, and oilseeds. The area under cultivation is gradually increasing, but large tracts still remain to be brought under the plough. Loans under the Agriculturists' Loans Act are taken in years of scarcity; in 1900-1 Rs. 17,000 was borrowed. There is abundant pasture everywhere, but the cattle are poor. Irrigation is practised by throwing embankments across the narrow valleys, the water which accumulates behind them being used for watering the fields below. There are 500 of such reservoirs in Angul.

An area of 251 square miles in the south and west of the Angul subdivision is 'reserved' forest and all other unoccupied lands in that area are 'protected' forest, covering 378 square miles. In 1903-4 the receipts of the Forest department amounted to Rs. 5,000, and the expenditure to Rs. 17,000. In the Khondmāls forests cover an area of 500 square miles, but they are not reserved or protected. The characteristic trees are *sāl* (*Shorea robusta*), *Terminalias*, such as *āsan* (*T. tomentosa*), mango, ebony, and bamboos; some teak has also been planted. *Mahuā* (*Bassia latifolia*) is very common in the Khondmāls, and the flowers are eaten largely

by the people. Among minor forest products are *sabai* grass (*Ischaemum angustifolium*), which is exported to the Calcutta paper-mills, and catechu.

Minerals. Coal-bearing strata crop up occasionally, but they have never yet been worked. Ironstone is found in Chhindipadā and other villages in Angul, and at Katrangā in the Khondmāls; it is smelted locally on a small scale in rough charcoal furnaces and bought by the village blacksmiths. Mica is also found in small quantities. Laterite is used for road-metalling and limestone for the manufacture of lime.

Arts and manufactures. The hand industries are cotton-weaving, basket- and mat-making, ironwork, and brass and bell-metal work. Cotton-weaving is carried on by the Pāns and a few Tāntis; the coarse cloth woven finds a local sale. Baskets are made by Gādras, Hāris, and Doms, and mats by Hāris, Doms, Pāns, and Khairās; they are sold locally and are also exported to the neighbouring States. Brass and bell-metal ornaments, *lotās*, and lamps are made by Kharurās.

Commerce. Trade is principally carried on with Cuttack, but there is some also with the surrounding States, with Purī and Ganjām. The principal exports from the Angul subdivision are rice, millets, gram, lentils, catechu, molasses, oilseeds, hides, and horns; and from the Khondmāls turmeric, *mahuā*, hides, horns, wax, honey, and shellac. Oilseeds are sold for cash in the Angul subdivision, where the rents are largely paid from the money realized; the other exports are generally bartered. The principal imports are piece-goods, salt, spices, *ghṛ*, sugar, dried fish, kerosene oil, brass-ware, and glass beads. The chief centres of trade are Angul, Sankhpur, and Bāgdīā, all in the Angul subdivision. Goods are carried either in carts or by pack-bullocks. In the Khondmāls the commerce is chiefly in the hands of traders from Cuttack and elsewhere, who attend the weekly marts held at Phulbāni and Khejarpāra.

Railways and roads. A branch railway has been proposed from Sambalpur to Cuttack, which would probably pass along the Sonpur road on the south bank of the Mahānādī. The main roads are the Cuttack-Angul-Tikarpāra, the Cuttack-Sambalpur, the Harbhāngā-Phulbāni, and the Russellkonda-Phulbāni roads, all of which are maintained from Provincial funds; with the exception of part of the Cuttack-Angul road, they are unmetalled and unbridged. There are also 225 miles of fair-weather tracks. The only ferry is one which crosses the Mahānādī at Tikarpāra.

Famine. The District is liable to famine, resulting from an irregular

distribution of the rainfall. In 1889 there was serious famine caused by successive droughts and by the failure not only of the regular crops, but also of those of the *mahuā* and mango trees. Revenue was remitted, agricultural advances made, and relief was afforded to 25,000 people at a cost of Rs. 44,000. In 1897 the crops partially failed, and some distress was caused, which was relieved at a cost of Rs. 20,000. In 1900 scarcity recurred owing to irregular rainfall, especially in the Khondmāls, where a bad attack of cholera aggravated the distress. On this occasion Rs. 43,000 was spent on relief.

The District is administered under a special Regulation (I of 1894). It is divided for administrative purposes into two subdivisions, with head-quarters at ANGUL and PHULBĀNI. The Deputy-Commissioner is assisted by a Deputy and Sub-Deputy-Magistrate at Angul and a subdivisional officer in the Khondmāls. The Deputy-Commissioner has the powers of a Collector, and is also an Assistant Superintendent of the Tributary States of Dhenkānāl, Barāmbā, and Pāl Laharā. The other officers have the powers of a Deputy-Collector.

The Commissioner of Orissa is the High Court for the District, except in respect of criminal proceedings against European British subjects. The Deputy-Commissioner has the powers of a District Magistrate, Sessions Judge, and District Judge in Angul; he has also, as Assistant Superintendent, the same powers in seven Tributary States. The Deputy-Magistrate at head-quarters and the subdivisional officer in the Khondmāls have the powers of subdivisional magistrates and of Munsifs; they are also Courts of Small Causes under Act IX of 1887. The people are law-abiding, and serious crime is rare. Formerly blood-feuds and human sacrifices were common, but these have disappeared under British administration.

The first settlement in the Angul subdivision was made in 1855, when 86 square miles were assessed at Rs. 46,000. A fresh settlement for a term of fifteen years was introduced in 1892, when the revenue was raised to Rs. 1,00,000, owing merely to extensions of cultivation and without any enhancement of rates. The revenue is collected by village headmen (*sarbarāhkārs*), who are allowed to appropriate the profits arising from extension of cultivation during the period of the settlement. The approximate rent per acre of rice lands is Rs. 1-5-4, and of other lands from Rs. 0-8-7 to Rs. 1-2-2; the average rate is Rs. 0-11-4. The cultivators possess occupancy rights, which, however, are not transferable without the

District
subdivi-
sions and
staff.

Civil and
criminal
justice.

revenue.

sanction of Government. In the Khondmāls no rent is paid, a tax of 3 annas per plough is collected as a road fund, to which an equal amount is contributed by Government.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees, since the District was constituted:—

	1892-3.	1900-1.	1903-4.
Land revenue . .	60	93	87
Total revenue . .	60	1,18	1,25

Police and jails. The District contains 2 *thānas* and 6 outposts. The regular police force, which is under an Assistant Superintendent, consisted in 1904 of 2 inspectors, 4 sub-inspectors, 144 head constables and constables, in addition to an armed police reserve of 22 men. The rural police is composed of *chauki-dārs*, who are remunerated by service lands. A District jail at Angul has accommodation for 101 prisoners, and a sub-jail at Phulbāni for 14.

Education. Education is more backward than in any other District in Bengal; only 2 per cent. of the population (3.9 males and 0.1 females) could read and write in 1901. Considerable progress, however, is now being made; and the total number of pupils under instruction increased from 2,472 in 1892-3 to 3,121 in 1900-1. In 1903-4, 3,842 boys and 257 girls were at school, being respectively 26.6 and 1.7 per cent. of the children of school-going age. The number of educational institutions, public and private, in 1903 was 159: namely, 2 secondary, 147 primary, and 10 special schools. Special lower schools are maintained for the Pāns. The expenditure on education was Rs. 18,000, of which Rs. 15,000 was met from Provincial funds and Rs. 3,000 from fees.

Medical. In 1903 the District contained 3 dispensaries, of which one had accommodation for 10 in-patients. The cases of 13,000 out-patients and 115 in-patients were treated, and 250 operations were performed. The expenditure was Rs. 7,000, which was met almost entirely by Government.

Vaccination. Vaccination is not compulsory, but considerable progress has been made. The number of successful vaccinations in 1903-4 was 7,000, or 36.3 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xix (1877); L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1908)].

Angul Subdivision.—Head-quarters subdivision of Angul District, Bengal, lying between 20° 32' and 21° 10' N. and

84° 18' and 85° 43' E., with an area of 881 square miles. This tract has the general characteristics of this part of Orissa, low wooded hills enclosing cultivated valleys intersected by numerous watercourses which run dry in the summer. The south is hilly, forming an outlying chain of the Sātpurā range; the line of hills, running from south-west to north-east, is the watershed between the Mahānadī river on the south and the Brāhmanī on the north. The population increased from 103,706 in 1891 to 127,697 in 1901, the density in the latter year being 145 persons per square mile. The low rents have attracted settlers from the neighbouring States. The subdivision contains 453 villages but no town; the head-quarters are at ANGUL.

Khondmāls.—Subdivision of Angul District, Bengal, lying between 20° 13' and 20° 41' N. and 83° 50' and 84° 36' E., with an area of 800 square miles. The population fell from 66,352 in 1891 to 64,214 in 1901, the decrease being due to the prevalence of cholera and other diseases, and to short crops in 1896 and 1899 which stimulated emigration. The density in 1901 was 80 persons per square mile. The subdivision consists of a plateau 1,700 feet in height, intersected by circular ranges of hills. Heavy forest still covers much of the area, and the cultivated lands lie in scattered clearings on the hill-sides and in the valleys below. A range of hills 3,000 to 3,300 feet in height separates the Khondmāls from Ganjām, forming the southern watershed of the Mahānadī. The head-quarters are at PHULBĀNĪ, and there are 995 other villages.

The Khonds, a Dravidian tribe, here survive as a distinct nationality with a history, a religion, a language, and a system of law and landed property of their own. The villages are divided from each other by rugged peaks and dense forests; but a regular system of government on the aboriginal plan is maintained, the hamlets being distributed into *muthas* each under the supervision of its own chief. Throughout this wild tract the Khonds claim an indefeasible right in the soil. At no time were they more than nominally subject to the Baud Rājā, who was totally unable to control or coerce them. They first came into prominence in the early part of the nineteenth century, owing to the prevalence among them of human sacrifices and female infanticide. The human sacrifice was a propitiatory offering to the earth-goddess, and the flesh of the victims was buried in the field to ensure good crops; it was firmly believed that turmeric could not have a deep-red colour without the shedding of blood. The victims, or *meriahs* as they were

called, were purchased, as an ancient rule ordained that the *meriah* must be bought with a price. The duty of providing them rested with the Pāns, who are attached to every Khond village as serfs, and who either kidnapped them from the plains or purchased them locally. These human sacrifices were suppressed with difficulty by the British Government.

The Khonds hold their lands directly under the Government and pay no rent or tax, except a contribution of 3 annas per plough for the improvement of communications. Infant and adult marriages are both common; in the former case, the girl is often older than the boy. The Khonds of the Khondmāls recognize two principal deities, Sāru Penu and Tānā Penu, of whom Sāru Penu may be described as the god of the hills and Tānā Penu as the earth-goddess.

[H. H. Risley, *Tribes and Castes of Bengal* (1891).]

Angul Village.—Head-quarters of Angul District, Bengal, situated in $20^{\circ} 48' N.$ and $84^{\circ} 59' E.$ Population (1901), 693. Angul contains the usual public offices. The District jail has accommodation for 101 prisoners, who are employed on oil-pressing, weaving, and bamboo work.

Phulbāni.—Head-quarters of the Khondmāls subdivision of Angul District, Bengal, situated in $20^{\circ} 29' N.$ and $84^{\circ} 16' E.$ Population (1901), 475. Phulbāni contains the usual public offices; the sub-jail has accommodation for 14 prisoners.

Boun-
daries, con-
figuration,
and hill
and river
systems.

Puri District.—Southern District in the Orissa Division of Bengal, lying between $19^{\circ} 28'$ and $20^{\circ} 26' N.$ and $84^{\circ} 56'$ and $86^{\circ} 25' E.$, with an area of 2,499¹ square miles. It is bounded on the north and north-east by Cuttack District; on the south-east and south by the Bay of Bengal; on the west by the Madras District of Ganjām; and on the north-west by the Tributary States of Nayāgarh, Ranpur, and Khandparā.

Its general shape is triangular, and it may be roughly divided into three tracts—west, central, and east. The western extends from the right bank of the Dayā river across the stony country of Dāndimāl and Khurdā, till it rises into the hills of the Tributary States. A low range, beginning in Dompāra and running south-east in an irregular line towards the Chilka Lake, constitutes a watershed between this tract and the Mahānadi river. The most important peaks are in the Khurdā subdivision. On the north of the Chilka Lake they become bold and very varied in shape, and throw out

¹ The area shown in the *Census Report* of 1901 was 2,472 square miles; that given above is taken partly from a report of the District Magistrate and partly from p. 47 of the *Orissa Settlement Report*.

spurs and promontories into the lake, forming island-studded bays, with fertile valleys running far inland between their ridges. The middle and eastern divisions consist entirely of alluvial plains, the south-western part of the Mahānadī delta. They are watered by a network of channels, through which the most southerly branch of that river, the Koyākhai, finds its way to the sea. The middle tract comprises the richest and most populous portion of the District; the eastern is less thickly peopled, and in the extreme east loses itself in the jungles around the mouths of the Devī. The following scheme briefly shows the river system of the District :—

Koyākhai .	{	Kushbhadrā .	{	Prāchī .	{	Kushbhadrā .	{	Bay of Bengal.
			Kushbhadrā .					
			Bhārgavī .	Bhārgavī .				
		Bhārgavī .	Nūn .	Dayā .		Chilka Lake.		
				Dayā .				

Only one of these rivers, the Kushbhadrā, reaches the sea. It follows a very winding course and is of little value for navigation. Its bed has silted up, and in seasons of heavy rainfall its floods devastate the surrounding country. The three rivers most important to the people of Purī are the Bhārgavī, the Dayā, and the Nūn, which all enter the Chilka Lake, after running widely diverse courses. During the dry season they die away into long shallow pools in the midst of winding stretches of sand, but in the rains they come down with a great rush of water that often threatens to burst the banks and inundate the surrounding country. Their banks are generally abrupt, and in many parts are artificially raised and strengthened as a protection against floods. The coast-line consists of a belt of sandy ridges, varying from 4 miles to a few hundred yards in breadth. It contains no harbours of any importance. Purī port is simply an unprotected roadstead, open from the middle of September to the middle of March. During the remainder of the year the surf does not allow of vessels being laden or unladen. The principal lakes are the CHILKA and the Sar. The latter is a backwater of the Bhārgavī river, 4 miles long by 2 broad. It has no outlet to the sea, from which it is separated by sandy ridges.

Some of the hills are composed of compact gneiss, most of Geology. the others being of garnetiferous rock with occasional bands of quartzose gneiss. Laterite forms a raised terrace-like plain around the hills, except a few far out in the alluvium; and it probably underlies the whole of the recent alluvium which covers the eastern portion of the District. On the southern bank of the Chilka Lake, in one or two places at an elevation

of 20 to 30 feet above the present flood-level, is found a bed of mud with estuarine shells, evidencing an elevation of the land since the comparatively recent period when the Chilka Lake had a freer communication with the sea than it now has. A similar deposit occurs at some places on the spit between the Chilka Lake and the sea¹.

Botany. In the Mahānadi delta, swampy places near the sea have on the banks of rivers and creeks the vegetation of a mangrove forest. Where sand-dunes intervene between the sea and the cultivated land behind, an equally characteristic littoral vegetation is met with, the principal species of which are *Spinifex*, *Hydrophyllax*, and *Geniosporum prostratum*. The cultivated land has the usual rice-field weeds, while ponds and ditches are filled with floating water-weeds or submerged water-plants. Near human habitations shrubberies of semi-spontaneous shrubs are common, and are loaded with a tangled mass of climbing *Convolvulaceae*. The arborescent portion of these village shrubberies includes the red cotton-tree (*Bombax malabaricum*), *jīyāl* (*Odina Wodier*), *Tamarindus indica*, *Moringa pterygosperma*, *pīpāl* (*Ficus religiosa*), banyan (*Ficus bengalensis*), and the palms *Borassus flabellifer* and *khajūr* (*Phoenix sylvestris*). In the north-west of the District some forests are under the control of the Forest department; these are described below.

Fauna. Small game is plentiful, but in the open part of the country the larger wild beasts have been nearly exterminated.

Climate, temperature, and rainfall. Puri District is directly on the track of the cyclonic storms which cross Orissa frequently during the monsoon season, but on the whole the sea-breezes ensure an equable climate. In April and May the average maximum temperature is 89°. The mean temperature falls from 86° in the hot months to 84° in the monsoon season and to 77° in February. Cyclonic storms occasionally occur in the north of the Bay in May, and with these storms weather of the south-west monsoon type prevails. The humidity ranges from 75 per cent. in December to 86 per cent. in August. The annual rainfall averages 58 inches, of which 8.4 inches fall in June, 10.9 in July, 12.1 in August, and 10.7 in September.

Natural calamities. The river channels near the coast can carry off only a small proportion of the flood-water which enters the low country

¹ *Memoirs, Geological Survey of India*, vol. i, pt. iii, 'The Geological Structure and Physical Features of the Districts of Bānkurā, Midnapore, and Orissa'; and *Records, Geological Survey of India*, vol. v, 'Sketch of the Geology of Orissa,' by W. T. Blanford.

through the Koyākhai, and the District is liable to disastrous floods. In twenty-four of the thirty-two years ending 1866, such serious floods occurred as to require remissions of revenue exceeding 4 lakhs, while more than $3\frac{1}{2}$ lakhs was expended by Government on embankments and other protective works. In 1866 more than 412,000 persons were driven by the floods from house and home. The years 1872, 1892, and 1896 were also memorable for high floods, those of 1892 being remarkable for their severity and those of 1896 for their duration. At such times the embankments are of little use, as they are either breached or overtopped. Proposals have been made to limit the floods entering the Koyākhai, but the cost of the schemes hitherto formulated is prohibitive.

The general history of Purī is that of ORISSA. The only History. two noteworthy political events that have taken place since the District passed to the British, together with the rest of the province in 1803, are the rebellion of the Rājā of Khurdā in 1804 and the rising of the *paiks* in 1817. The Rājā of Khurdā, although stripped of a considerable portion of his territory, had been left by the Marāthās in comparative independence within his own fort. When the British entered the province, the Rājā passively espoused their cause, and the decision of the Commissioners to retain the *parganas* taken by the Marāthās was acquiesced in by him. But after the European troops had returned to Madras and the Native force at Cuttack had been considerably reduced by the necessity of establishing detached outposts in different parts of the country, the Rājā's mob of *paiks* and peons made a raid on the villages in the vicinity of Piplī. Troops were summoned from Ganjām and a detachment was quickly dispatched from Cuttack. The rebels, driven out of Piplī, retreated to the fort at Khurdā, followed by our troops. In three weeks the approaches, which were stockaded and fortified with strong masonry barriers, were carried by storm. The Rājā made his escape, but surrendered a few days later. His territory was confiscated; and he was kept in confinement until 1807, when he was released and allowed to reside in Purī town, and an allowance was made for his maintenance.

In 1817 the *paiks* or landed militia rose in open rebellion against the oppressions suffered at the hands of the underlings to whom was entrusted the collection of the revenue, and also against the tyrannies of a venal police. The rebels, led by one Jagabandhu, attacked the police station and Government offices at Bānpur, where they killed upwards of a hundred

men and carried off about Rs. 30,000 of treasure. The civil buildings at Khurdā were burnt to the ground, and another body of the insurgents advanced into the Lembai *pargana* and there murdered one of the native officials. The authorities at Cuttack at once dispatched a force, one detachment of which marched direct to Khurdā, and another to Piplī. After some severe fighting British authority soon re-established itself everywhere. The Rājā, who had joined the rebels, was captured in Purī town, as he was on the point of taking flight, and was removed to Calcutta and placed in confinement in Fort William, where he died in November, 1817. The country was gradually restored to order and tranquillity; and at the present day Khurdā is a profitable Government property, the cultivators being a contented and prosperous class. The father of the present Rājā of Khurdā was convicted in 1878 of murder and sentenced to penal servitude for life. The present Rājā is the hereditary superintendent of the temple of Jagannāth, but has delegated all his powers as such to a Deputy-Magistrate-Collector for a period of five years.

Archaeo-
logy.

The District contains numerous antiquities of surpassing interest, of which the most important are the great temple of Jagannāth in PURĪ TOWN, the caves and rock sculptures at KHANDGIRI and Udayagiri, the Lingarāj temple and other remains at BHUBANESWAR, the black pagoda at KONĀRAK, and the Asoka inscription at DHAULI.

The
people.

The population of the District increased from 769,779 in 1872 to 888,592 in 1881, 944,998 in 1891, and 1,017,284 in 1901. The public health has not been good since 1891. Cholera is imported annually by pilgrims, fever is prevalent during the cold season, while small-pox occasionally appears in a virulent form.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages				
Purī . . .	1,528	1	1,889	658,048	431	+ 7.2	49,644
Khurdā . .	971	...	1,212	359,236	370	+ 8.4	23,023
District total	2,499	1	3,101	1,017,284	407	+ 7.6	72,667

The only town is PURĪ, the head-quarters. The density for the whole District is lower than it would otherwise be owing

to the inclusion of the area of the Chilka Lake, the population of the head-quarters *thāna* in which the greater part of it is situated being only 254 persons per square mile, against 753 in Piplī. Pilgrims were exceptionally numerous at the time when the last Census was taken, but apart from this the ebb and flow of population is very slight. The vernacular of the District is Oriyā. Buddhism, for ten centuries the prevailing religion of Orissa, has left no traces beyond the cave-dwellings of the hermits and some recently deciphered inscriptions. Sun-worship was one of the principal forms into which Buddhism disintegrated, and its most exquisite memorial is the temple of Konārak. At the present day no less than 98·2 per cent. of the population are Hindus, and 1·7 per cent. Muhammadans.

Chāsas, the chief cultivating caste of Orissa, number 300,000, Castes and occupations.
Brāhmans 101,000, Bauris 84,000, Gauras 53,000, Guriās 26,000, and Karans and Kewats 33,000 each. The Guriās are the confectioner and the Karans the writer caste of Orissa. Of the less common castes two hill tribes, the Khonds and Savaras, have a few representatives, Kumutis are a caste practically confined to Purī and the Orissa Tributary States, and Daitās and Kāhālias are small castes peculiar to this District. Of the total population, 60 per cent. are supported by agriculture, 16·5 per cent. by industries, 0·4 per cent. by commerce, and 4·0 per cent. by the professions.

Christians number 1,078, of whom 913 are natives; the only Christian mission is the Baptist Mission, with stations at Purī town and six other places. missions.

The greater part of the head-quarters subdivision is subject to floods; and except in the west, where the subdivision encroaches on the laterite uplands of Khurdā, and along the sea-shore in the south and east, where the sand forms a belt of varying width, the soil is of the normal alluvial type, consisting of every variety of mixture from almost pure sand to almost pure mud. In the north sandy loams are most common, while in the lower levels of the southern *parganas* black soils are more general. The surface of the Khurdā subdivision is composed of the detritus of metamorphic rock, sandstone, and vegetable mould, and is therefore for the most part fertile. General agricultural conditions.

The chief agricultural statistics for 1903-4 are shown in the table on the next page, in square miles. Chief agricultural statistics

Rice is the staple food-grain, covering 1,030 square miles, and principal crops.
or 87 per cent. of the cultivated area. The most important variety is the *sārad* or winter crop, which is grown on 923

square miles; early rice (*biāli*) and spring rice (*dālua*) are also cultivated, but the proportions are small. The winter rice, which is for the most part transplanted from seedlings, is divided into three classes, known as *bara*, *mājhā*, and *laghu* according to the amount of water required. Pulses occupy 124 square miles, or 11 per cent. of the total cultivated area, the chief kinds being *kulthā*, *mūng*, and *birhi*. *Maruā* is grown in parts, chiefly as a second crop; and castor-oil, sugar-cane, cotton, indigo, *pān*, tobacco, and vegetables, though occupying small areas, possess some importance.

Subdivision.	Total.	Cultivated	Cultivable waste.	Forests.
Puri . . .	1,528	636	26	368
Khurdā . . .	971	536	222	113
Total	2,499	1,172	248	481

Improve-
ments in
agricul-
tural
practice.

Cultivation has steadily extended since the settlement of 1837, except in a few tracts where it has been checked by the calamitous floods of recent years. Agricultural experiments have been set on foot in the Khurdā Government estate, but the ryots are slow to adopt improvements. Cow-dung is generally used as manure. During the ten years ending 1902, Rs. 48,000 was advanced under the Agriculturists' Loans Act and Rs. 25,000 under the Land Improvement Loans Act.

Cattle.

The cattle are similar to those found in the southern Districts of Lower Bengal. In the head-quarters subdivision about 4 per cent. of the total area in each village was set apart at the recent settlement for grazing purposes.

Irrigation

Irrigation is little resorted to, except for the spring rice and the February pulse crops. The water is derived from the Sar lake and various big reservoirs and tanks, and is raised either by a mat scoop, by a hollow tree-trunk (*jantā*), or by unglazed earthen pots fixed to a bamboo lever (*tendā*).

Forests.

The forests of the Puri Forest division lie within what is technically known as the 'dry evergreen' forest zone, and comprise *sāl* and mixed forest. They consist of 110 square miles of 'reserved' and 371 square miles of 'protected' forests in the Khurdā Government estate. In the metamorphic region to the south-west the *sāl* (*Shorea robusta*) is seen at its best, its chief companions being *ablus* (*Diospyros melanoxylon*), *Careya arborea*, *āsan* (*Terminalia tomentosa*), and *Buchanania latifolia*. In the mixed forest the chief species are *Anogeissus latifolia*, *jiyal* (*Odina Wodier*), *kusum* (*Schleichera trijuga*),

Pterospermum suberifolium, and *Dillenia Pentagyne*, while in the north-west *Hylia dolabrifomis* (the ironwood tree of Pegu and Arakan) is extremely common. Of bamboos, *Bambusa arundinacea* and *Dendrocalamus strictus* abound. Climbers are numerous, the most noticeable being *Bauhinia Vahlīi*, *Milletia auriculata*, *Entada scandens*, and *Combretum decandrum*. Teak is being planted with fair success. *Strychnos Nux-vomica* seed is collected by the department for sale, and *kamalagundi* powder (*Mallotus philippinensis*) is gathered as a dye. The total receipts of the Forest department in 1903-4 amounted to Rs. 39,000.

Laterite, lime, and sandstone are found in the Khurdā sub-division ; but no quarries are regularly worked. Minerals.

Tasar and cotton cloth, brass and bell-metal utensils, brass, gold, and silver ornaments, and wickerwork baskets are manufactured. Images of the Hindu gods are carved in stone, often with a considerable degree of skill. Coarse sugar is prepared from sugar-cane. Arts and manufactures.

The chief exports are rice, gram, pulse, unrefined sugar, coco-nuts, brass, and silk ; and the chief imports are raw cotton, cotton piece-goods, refined sugar, spices, nuts, iron, tobacco, kerosene oil, salt, and copper. Purī town, Satyabādī, Piplī, Bālkāti, Khurdā, and Bānpur are the centres of trade. Rice is shipped in considerable quantities from Purī for the Madras ports and for Colombo and Mauritius, the value of the trade to Colombo and Mauritius in 1903-4 being 6.55 lakhs. With this exception, nearly the whole of the external trade has been absorbed by the railway. During the rains some traffic is carried up and down the rivers in country boats. Trade is chiefly in the hands of people of the Brāhman, Teli, Gurīā, and Tānti castes. Commerce.

The East Coast section of the Bengal-Nāgpur Railway passes through the entire length of the Khurdā subdivision. A branch line 28 miles long connects Purī town with Khurdā Road station. The District is well supplied with roads, the principal being the pilgrim road from Cuttack to Purī, and the Cuttack-Ganjām road which traverses the Khurdā subdivision. These are linked together by two important cross roads : namely, the metalled road from Piplī to Khurdā, connecting these places with the railway at Khurdā Road station, and the Pātnaikā-Khurdā road. All these roads are metalled. Other important roads are those running westwards from Khurdā to the Central Provinces, and the road from Mādhab to Purī via Gop, a continuation of the Cuttack District road, Railways and roads.

which takes off from the pilgrim road at Mādhav. The Cuttack-Purī and the Cuttack-Ganjām roads, with a length of $107\frac{1}{2}$ miles, are maintained by the Public Works department; while 108 miles of metalled and 114 miles of unmetalled roads are under the control of the District board. The Kushbhadra, Bhārgavī, and Dayā rivers are navigable for several months of the year. The most important ferries are those where the Ganjām and Purī trunk roads cross the large rivers.

Famine. The greatest famine within living memory is that of 1866, which was felt with more intensity in Purī than in either Cuttack or Balasore. In 1865 the rice crop had utterly failed. The rainfall in the District averages about 58 inches; but in that year only 36.3 inches fell, of which 5.2 inches fell in September and none at all subsequently. The local supply of rice was wholly inadequate, and prices rose rapidly. Government was compelled to import rice; but in June, 1866, it was selling at 6 seers a rupee, and even when supplies of rice began to find their way into the District, the quantities received were so small that it was impossible to carry on the relief operations without a break. In August the widespread distress was aggravated by a severe inundation, and the mortality became appalling. The position began to improve in November, when large supplies of rice were received, but in certain tracts gratuitous relief had to be continued for many months longer. In October, 1866, it was reported that 210,866 deaths had occurred during the year. These figures, imperfect as they probably are, give a mortality of no less than 360 per 1,000. The total quantity of grain imported by Government into Purī in 1866 amounted to 47,383 maunds; of this, 16,626 maunds were distributed gratuitously and 5,940 were sold at cheap rates. A sum of Rs. 1,03,000 was expended by the Public Works department in providing work for the distressed.

Scarcities have since occurred in 1884, 1885, 1888, and 1897. During 1896 the rainfall was unseasonable and badly distributed, and some parts of the District were visited by an insect pest. The area affected was 365 square miles with a population of 102,000 persons, chiefly near the Chilka Lake. Relief operations were opened in February and closed in September, 1897. The total recorded mortality during this period was 4,231; Rs. 21,000 was spent on relief, of which Rs. 18,000 was contributed from charitable funds. The number of persons relieved was 42,455. In addition Rs. 15,000 was advanced to the Rājā of Pārikūd for the repairs of the embankments in his estate, and Rs. 18,000 was distributed in

loans to the cultivators to enable them to sow their lands; Rs. 80,000 of revenue was remitted, and suspensions of the demand were granted to the extent of Rs. 65,000.

For administrative purposes the District is divided into two subdivisions, with head-quarters at PURĪ and KHURDĀ. The administrative staff at Purī, subordinate to the District Magistrate-Collector, consists of three Deputy-Magistrate-Collectors; the subdivisional officer of Khurdā is a Deputy-Magistrate-Collector, and he is assisted by a Deputy-Collector and a Sub-Deputy-Collector. An Inspector of salt is stationed at Purī, and a Deputy-Conservator of forests at Khurdā. District subdivisions and staff.

The District and Sessions Judge is also Judge of Cuttack and Balasore; the only other civil court is that of a Munsif at Purī, assisted occasionally by an additional Munsif from Cuttack. The criminal courts include those of the Sessions Judge, the District Magistrate, and the above-mentioned Deputy-Magistrates. The Oriyas are generally a law-abiding people, and organized crime by professional criminals is almost unknown; it has hitherto been confined to the occasional drugging and robbing of pilgrims on the road to Purī town, and infrequent dacoity. Civil and criminal justice.

Under British rule the first settlement of land revenue, excluding Khurdā, was made in 1804-5 on the basis of the assessment papers obtained from the record-keeper and *sadr kānūngō* of the Marāthās. Purī at this time formed part of the southern division of Orissa, or the tract south of the Mahānadi. In 1837 a settlement was made for thirty years; this expired in 1867, but owing to the recent famine it was extended till 1897; a new settlement for thirty years was then made with effect from 1899, with a current demand of 3.77 lakhs. These figures, as already stated, exclude the Khurdā Government estate, the area of which is 1,013 square miles, of which all but 42 square miles constitute the Khurdā subdivision. The current settlement is for fifteen years from 1897; the demand from this estate is 3.27 lakhs. The total land revenue demand of the District in 1903-4 was 7.27 lakhs, of which Rs. 10,000 was payable by 3 permanently settled estates, 2.60 lakhs by 483 temporarily settled estates, and 4.57 lakhs by 4 estates held direct by Government. There are in many cases intermediate tenure-holders with quasi-proprietary rights, known as *mukaddams*, *padhāns*, *sarbarāh-kārs*, and *pursethis*, who are survivals of the tenures existing before the first British settlement, described in the article on CUTTACK DISTRICT. The average area held by a ryot is about Land revenue.

2 acres, and the incidence of rent per acre is Rs. 1-10 in the Khurdā estate, and Rs. 1-11-7 in the remainder of the District, the average rate varying from Rs. 1-7-3 for non-occupancy ryots to Rs. 1-15-5 for settled and occupancy ryots; the rate on homestead lands is Rs. 6-9-8 per acre.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	4,64	6,56	7,74	7,51
Total revenue . .	6,44	9,16	11,41	11,77

Local and
municipal
govern-
ment.

Outside the municipality of PURĪ, the management of local affairs rests with the District board, to which subdivisional local boards are subordinate. In 1903-4 its income was Rs. 82,000, of which Rs. 35,000 was derived from rates; and the expenditure was Rs. 85,000, including Rs. 40,000 spent on public works and Rs. 30,000 on education.

Police and
jails.

The District contains 6 police stations and 19 outposts. In 1903 the force subordinate to the District Superintendent consisted of 3 inspectors, 32 sub-inspectors, 31 head constables, and 380 constables. There was, in addition, a rural police force of 211 *daffadārs* and 2,149 *chaukidārs*. The District jail at Purī has accommodation for 126 prisoners, and a subsidiary jail at Khurdā for 10.

Education.

In 1901, 6.2 per cent. of the population (13.9 males and 0.4 females) could read and write. The number of pupils under instruction was about 20,000 in 1884, 20,964 in 1892-3, and 20,902 in 1900-1. In 1903-4, 24,342 boys and 2,442 girls were at school, being respectively 32.0 and 3.1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 2,033: namely, 22 secondary, 1,384 primary, and 627 special schools. The chief educational institution is the Purī District school. For the education of aborigines and depressed tribes four lower primary schools are maintained. The expenditure on education was Rs. 1,22,000, of which Rs. 17,000 was met from Provincial funds, Rs. 30,000 from District funds, Rs. 1,150 from municipal funds, and Rs. 62,000 from fees.

Medical.

In 1903 the District contained 11 dispensaries, of which 8 had accommodation for 150 in-patients. The cases of 53,000 out-patients and 1,200 in-patients were treated, and 2,000 operations were performed. The expenditure was Rs. 17,000, while the income was Rs. 18,300: namely, Rs. 1,600 from

Government contributions, Rs. 12,000 from Local and Rs. 4,000 from municipal funds, and Rs. 700 from subscriptions.

The District often suffers severely from small-pox, the average death-rate from this cause during the last quinquennium being 2.24 per 1,000. Vaccination is compulsory only in Puri municipality. The people generally are averse to vaccination, but in spite of this the number of successful vaccinations rose in 1903-4 to 48,000, or 49 per 1,000 of the population.

[B. K. Ghosh, *History of Puri with an Account of Jagannāth* (Cuttack, 1848); W. W. Hunter, *Orissa* (1872), and *Statistical Account of Bengal*, vol. xviii (1877); W. H. Lee, *History of Puri* (Calcutta, 1898), and *Inscriptions in the District of Puri* (Cuttack, 1898); J. Taylor, *Settlement Report of Khurda Estate* (Calcutta, 1900); S. L. Maddox, *Settlement Report of Orissa* (Calcutta, 1900); L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1908).]

Puri Subdivision.—Head-quarters subdivision of Puri District, Bengal, lying between $19^{\circ} 28'$ and $20^{\circ} 23'$ N. and $85^{\circ} 8'$ and $86^{\circ} 25'$ E., with an area of 1,528 square miles. The population in 1901 was 658,048, compared with 613,575 in 1891, the density being 431 persons per square mile. The subdivision forms the south-western section of the Mahānadi delta, and consists almost entirely of alluvial country stretching from the Eastern Ghāts to the Bay of Bengal. It contains one town, PURI (population, 49,334), the head-quarters; and 1,889 villages. The famous temple of Jagannāth is situated in Puri town, while other important antiquities are the black pagoda at KONĀRAK and the Asoka inscription at DHAULI. The Chilka Lake in the south-west corner of the subdivision occupies about one-fifth of its total area.

Khurdā Subdivision.—Western subdivision of Puri District, Bengal, lying between $19^{\circ} 41'$ and $20^{\circ} 26'$ N. and $84^{\circ} 56'$ and $85^{\circ} 53'$ E., with an area of 971 square miles. The population in 1901 was 359,236, compared with 331,423 in 1891, the density being 370 persons per square mile. The subdivision adjoins the south-eastern fringe of the Chotā Nāgpur plateau, and detached hills of gneiss occur, the plains between them consisting of laterite and alluvium. It contains 1,212 villages, one of which, KHURDĀ, is the head-quarters; but no town. At BHUBANESWAR are situated the celebrated Lingarāj temple and numerous other temples, and the KHANDGIRI and Udayagiri hills contain many caves and rock temples.

Khurdā was the last portion of territory held by the inde-

pendent Hindu dynasty of Orissa. The Marāthā cavalry were unable to overrun this jungle-covered and hilly tract; and the ancient royal house retained much of its independence till 1804, when the Rājā rebelled against the British Government and his territory was confiscated. A rising on the part of the peasantry took place in 1817-8, due chiefly to the oppression of the minor Bengali officials. The insurrection was speedily quelled, reforms were introduced and grievances redressed; and at the present day Khurdā is a profitable and well-managed Government estate, the cultivators being a contented and generally prosperous class. The current settlement dates from 1897, when the demand was assessed at 3.77 lakhs. The Rājā of Khurdā is hereditary superintendent of the temple of Jagannāth, but the present Rājā has delegated all his powers as such for five years to an experienced Deputy-Magistrate-Collector.

[J. Taylor, *Settlement Report* (Calcutta, 1900).]

Bhubaneswar.—Temple city of Siva in the Khurdā subdivision of Purī District, Bengal, situated in 20° 15' N. and 85° 50' E., 3 miles from the Bengal-Nāgpur Railway. Population (1901), 3,053. Its traditions date from remote antiquity, when it was distinguished for nothing more than a single mango-tree (*ekāmṛavana*), whence the name Ekāmratīrtha.

Bhubaneswar was the great seat of Saivism in Orissa, and all the great temples here are consecrated to the *lingam*, the emblem of the 'great god' Mahādeo. It is said that it was originally intended as a rival of Benares, and that no details were omitted to make it an exact counterpart of its prototype. Tradition attributes the foundation of the various temples at Bhubaneswar to the kings of the Kesari dynasty, who are supposed to have ruled over Orissa from the sixth to the twelfth century A.D.; but the existence of this dynasty is doubtful, and the only true dates known with some certainty are those of the temples of Brahmeswar, Megheswar, and Ananta Bāsudeva, all of which were built towards the end of the twelfth century. With regard to the remainder, we are left entirely in the dark; but it may well be surmised that the sanctity of the place and of many of its holy shrines goes back to much earlier ages. According to popular belief, 7,000 shrines once clustered round the sacred lake of Bhubaneswar; but at present scarcely more than 100 remain. They exhibit a variety of architectural types, some being plain single towers, others having porches and halls in front with elaborate mouldings.

The best and most interesting specimens among the vast number of ancient temples at this famous place are the following: the great Lingarāj temple, with the temple of Bhagavatī within its compound, the temple of Ananta Bāsudeva, the temple of Mukteswar, the Rājā-Rānī temple, the temple of Brahmeswar, the temple of Bhāskareswar, the Vaitalā *deul*, and the temple of Parasu Rāmeswar. The Lingarāj temple stands within a large courtyard surrounded by a high wall. The temple includes a suite of four buildings standing in file, called the *deul* or temple proper, the *mohan* or porch, the *bhogmandir* or refectory, and the *nātmandir* or dancing hall. Of these the first two were built at the same time and in a style quite different from the others, which were built long after at different times and on different plans. The form in which Bhubaneswar (Lord of the Universe) is represented in the sanctuary is that of a huge uncarved block of granite called the *lingam*, about 8 feet in diameter and rising 8 inches above the level of the floor. It is half buried in the centre of the room, and is surrounded by a raised rim of block chlorite ending on the north side in a point. This rim is called the *yoni* or the female emblem. All these temples have recently been repaired by Government and are now in a fair state of preservation. The temple of Bhāskareswar is a unique structure, with a huge stone *lingam* inside reaching from the ground to the upper storey of the temple. The town also contains three sacred tanks: the Bindu Sāgar or Gosāgar, measuring 1,400 by 1,100 feet, the Sahasra *lingam*, and the Pāpanāsinī.

[*List of Ancient Monuments in Bengal* (Calcutta, 1896), and *Report of the Archaeological Survey of India for 1902-3* (Calcutta, 1904).]

Dhauli.—Hill in the Khurdā subdivision of Purī District, Bengal, situated in 20° 15' N., and 85° 50' E., about 7 miles south of Bhubaneswar. On the northern side of the hill is a version of the famous rock edicts of Asoka. As in the version of Jaugada in the neighbouring District of Ganjām, the twelfth and thirteenth edicts have been left out, and in their place two separate edicts have been inserted. Above the inscription the forepart of an elephant has been carved out of the rock. The hill contains a number of plain caves, and has a temple of Mahādeo on its summit.

Khandgiri.—Hill in the Khurdā subdivision of Purī District, Bengal, situated in 20° 16' N. and 85° 47' E., about 4 miles west of Bhubaneswar. It consists of two separate peaks, the northern one of which is called Udayagiri and the southern

Khandgiri, the last name being also applied to the entire group. The caves on this hill were occupied by monks of the Jain sect, and not, as is usually stated, by Buddhists. The earliest of them go back to the time of king Khāravela, whose large but mutilated inscription over the Hāthi Gumpha cave is dated in the year 165 of the Maurya era, or 155 B. C. ; and there are also short inscriptions of his queen and immediate successors. Various mediaeval Jain carvings and inscriptions show that the Jains continued to occupy the caves till about the twelfth or thirteenth century ; and there still exist later Jain temples, one of which, on the top of the Khandgiri peak, is annually visited by Jain merchants from Cuttack. Of the oldest caves the most interesting are the following : On the Udayagiri peak, (1) the Rānī Gumpha, comprising two storeys with open verandas. The frieze of the upper veranda contains a series of relief carvings, evidently representing one connected story, in which occurred a fight with wild elephants, the rape of a female, and a hunt after a winged antelope ; the legend to which it refers has not, however, been traced. (2) The Ganesh Gumpha, with a carved frieze representing the same story as in the Rānī Gumpha ; the steps of the cave are flanked by the figures of two elephants. (3) The Hāthi Gumpha, with the famous inscription of king Khāravela, a purely historical record of the principal events of his life. Unfortunately it has been badly mutilated, but it has recently been protected by a shade to preserve it from further destruction. (4) The Bāgh Gumpha, shaped like the head of a tiger ; and (5) the Svarga Gumpha, (6) the Maujapuri, and (7) the Pātāl Gumpha, three caves raised one above the other and consequently now explained as a representation of heaven, earth, and hell. On the Khandgiri peak, the most notable of the old caves are the Ananta Gumpha, with carved panels over its gates, representing Lakshmī, the Sun-god, an elephant, and the worship of a sacred tree ; the Tentuli Gumpha, so called from a tamarind-tree close to it ; and the Tantuā Gumpha I and Tantuā Gumpha II, one above the other. The name *tantuā* means a diving-bird, and has been given to these caves on account of the figures of birds, with their heads bent down as if in the act of diving, which have been carved over the arches of the doors. The best specimens of mediaeval caves are : the Navamuni cave, with an inscription dated in the eighteenth year of king Uddyota Kesari, who preceded the Ganga kings and belonged to the family of the so-called Somavansi, or kings of the lunar race, who ruled over Orissa in the tenth and eleventh centuries ;

and the Sātghara cave, which has numerous mediaeval Jain figures carved over its walls.

[*Report of the Archaeological Survey of India for 1902-3* (Calcutta, 1904).]

Khurdā Village.—Head-quarters of the subdivision of the same name in Purī District, Bengal, situated in $20^{\circ} 11' N.$ and $85^{\circ} 38' E.$, on the high road from Cuttack to Ganjām in Madras, and connected by road with the Bengal-Nāgpur Railway. Population (1901), 3,424. Between 1818 and 1828 Khurdā was the head-quarters of Purī District, transferred in the latter year to Purī town. It contains the usual public offices; the sub-jail has accommodation for 10 prisoners.

Konārak.—Ruined temple in the head-quarters subdivision of Purī District, Bengal, situated in $19^{\circ} 53' N.$ and $86^{\circ} 6' E.$, about $1\frac{1}{2}$ miles from the sea and 21 miles east of Purī town. The temple was built and dedicated to the Sun-god by Narasingha Deva I of the Ganga dynasty of Orissa, who ruled from 1238 to 1264. Konākona appears to have been the ancient name, and the modern name thus stands for Konārka, meaning 'the *arka* (Sun-god) at Kona.' It consisted of a tower, probably a little over 180 feet in height, and of a porch or *mandap* in front of it, about 140 feet high. The principal gate was to the east, and was flanked by the figures of two lions, mounted upon elephants. The northern and southern gates were sculptured with the figures of two elephants, each lifting up a man with his trunk, and of two horses, richly caparisoned and led by warriors. Each gate was faced by exquisite chlorite carvings, of which those of the eastern gate are still in perfect preservation. Above this gate was an enormous chlorite slab, bearing the figures of the nine planets, which is now lying a little distance from the temple and has become an object of local worship; and above this slab there was originally a statue of the Sun-god, seated cross-legged in a niche. Along the plinth are eight wheels and seven horses, carved in the stone, the temple being represented as the car of the Sun-god drawn by his seven chargers. East of the *mandap*, or porch, stands a fine square building with four pillars inside, which evidently was used as a dancing-hall, as the carvings on its walls all represent dancing-girls and musicians. The wall of the courtyard measures about 500 by 300 feet; and it originally contained a number of smaller shrines and out-houses, of which only the remains can now be traced. The entire courtyard till recently was filled with sand; but since 1902 Government has carried on systematic excavations, which have

brought to light many hidden parts of the temple itself and of other structures. The great tower of the temple collapsed long ago, and at the present day forms a huge heap of débris west of the porch; but it is believed that about one-third of it will be found intact below the broken stones, as soon as they have been removed. In order to preserve the porch, it has been filled up with broken stones and sand, and is now entirely closed from view; its interior was plain and of little interest. In spite of its ruinous state, the temple still forms one of the most glorious examples of Hindu architecture. Even the fact that many of the carvings around its walls are repulsive to European notions of decency cannot detract from the beauty of an edifice of which Abul Fazl said that 'even those whose judgement is critical and who are difficult to please, stood astonished at its sight.'

[Rājendralāla Mitra, *The Antiquities of Orissa* (Calcutta, 1875, 1880); and the *Reports of the Archaeological Survey of India for 1902-3 and 1903-4* (Calcutta, 1904, 1906).]

Puri Town.—Head-quarters of Puri District, Bengal, situated in $19^{\circ} 48'$ N. and $85^{\circ} 49'$ E., on the coast. It is celebrated as the site of the great temple of Jagannāth, by which name it is commonly known. The population, which was 22,695 in 1872 and 22,095 in 1881, increased to 28,794 in 1891 and to 49,334 in 1901. During the great festivals the population is swollen by many thousands of pilgrims; and on the occasion of the Census of 1901 over 17,000 were present in the town. The ordinary resident population is therefore about 32,000. The number of houses in 1901 was 7,521. Puri was constituted a municipality in 1881. The income during the decade ending 1901-2 averaged Rs. 44,000, and the expenditure Rs. 36,000. In 1903-4 the income was Rs. 61,000, of which Rs. 19,000 was derived from a tax on houses and lands (or property tax) and Rs. 12,000 from a conservancy rate; and the expenditure was Rs. 47,000.

Puri is a city of lodging-houses, being destitute alike of manufactures or commerce on any considerable scale. The streets are mean and narrow, with the exception of the principal avenue which leads from the temple to the country house of Jagannāth. The houses are built of wattle covered with clay, raised on platforms of hard mud about 4 feet high, and many of them gaily painted with Hindu gods or with scenes from the Sanskrit epics. The intervening sandhills between the town and the beach intercept the drainage, and aggravate the diseases to which the overcrowding of the pilgrims gives

rise. A number of measures have recently been taken for the improvement of the sanitary condition of the town. To prevent overcrowding, iron sheds and resthouses have been erected for the accommodation of excess pilgrims; arrangements are being made to shelter indigent lepers; steps have been taken to clean the Swetganga tank by means of a pulso-meter pump, and the water is used to flush the drains along the Baradand; and a complete drainage scheme for the town is in contemplation. The opening of the railway has greatly mitigated the dangers of the journey. Formerly thousands of pilgrims used to die annually upon the road from exhaustion and want of food. But now pilgrims visit Purī at all times during the year, and this has affected the number that flock to the town during the two chief festivals. Moreover, many pilgrims now hasten away as soon as the gods have left the temple and the dragging of the cars has commenced. For the poorer pilgrims who have to make the journey on foot, pilgrim hospitals have been opened along the main lines of road, and a medical patrol has been established in the vicinity of the holy city. The great difficulty has been to check the overcrowding in Purī town, but much good has resulted from the working of the Purī Lodging-house Act (Bengal Act IV of 1871).

The Government offices stand on the beach, with a sandy ridge between them and the town. The site is salubrious, and the monsoon blows so fresh and cool from the sea that in former days the officials from Cuttack used regularly to come to Purī during the hot season. During the rains it is less healthy. The District jail has accommodation for 126 prisoners, who are employed on oil-pressing and the manufacture of coir yarn. The chief educational institutions are the District school, to which is attached a hostel for non-resident students, the Haras Chandi Sahi middle school for the sons of the *pāṇḍās* or priests of Jagannāth, and the Purī Sanskrit school.

The shrine of Jagannāth is the region of pilgrimage beloved of Vishnu, known to every hamlet throughout India as the abode of Jagannāth, the 'Lord of the World.' According to tradition, Jagannāth made his first historical appearance in the year A.D. 318, when the priests fled with the sacred image and left an empty city to Rakta Bāhu, and his buccaneers. For $1\frac{1}{2}$ centuries the idol remained buried in the western jungles, till a pious prince drove out the foreigners and brought back the deity. Three times it has been buried in the Chilka

Lake ; and whether the invaders were pirates from the sea or the devouring cavalry of Afghānistān, the first thing that the people saved was their god. The true source of Jagannāth's undying hold upon the Hindu race consists in the fact that he is the god of the people. The poor outcast learns that there is a city on the far eastern shore, in which priest and peasant are equal in the presence of the 'Lord of the World.' In the courts of Jagannāth and outside the Lion Gate thousands of pilgrims every year join in the sacrament of eating the holy food, the sanctity of which overleaps all barriers of caste, for a Purī priest will receive food even from a low-caste Hindu. The worship of Jagannāth aims at a catholicism which embraces every form of Indian belief and every Indian conception of the deity. He is Vishnu under whatever form and by whatever title men call upon his namē. The fetishism of the aboriginal races, the nature-worship of the Vedas, and the lofty spiritualism of the great Indian reformers, have alike found refuge here. Besides thus representing Vishnu in all his manifestations, the priests have superadded the worship of the other members of the Hindu trinity in their various shapes, and the disciple of every Hindu sect can find his beloved rites and some form of his chosen deity within the sacred precincts.

It has been conjectured that the worship of Jagannāth is an adaptation by the Brāhmans of some Buddhist cult. Purī probably was the original place where the famous tooth relic of Buddha was worshipped ; and it is noticeable that the wooden image of Jagannāth contains a certain article, about which the priests maintain perfect silence, and which is never replaced by another new piece, whenever the image is renewed. The crude form of the images of Jagannāth, his brother Balarām, and his sister Subhadrā, with their round shapeless heads and their arms represented by stumps only, strangely resembles the Buddhist symbol of a wheel supported by a *trisūla* or trident. The abolition of caste rules in regard to the *mahāprasād*, or the sacred food cooked in the temple, recalls the protest of Buddhism against caste prejudices. In some modern representations of the ten incarnations of Vishnu, the place of the ninth or Buddha incarnation (*avatār*) is occasionally occupied by the figure of Jagannāth.

The temple appears to have been built by king Choda Ganga in the second half of the twelfth century, not, as tradition has it, by Ananga Bhīma. It soon became famous, and the devotion of centuries has made Jagannāth a very wealthy god ; the income was estimated in 1877 at more than 7 lakhs,

though the temple authorities deny that it reaches anything like so high a figure and allege that it is only a little over one lakh. The immediate attendants on the god are divided into 36 orders and 97 classes, at the head of whom is the Rājā of Khurdā, the representative of the ancient royal house of Orissa, who takes upon himself the lowly office of sweeper to Jagannāth. Decorators of the idol, priests of the wardrobe, cooks, dancing-girls, grooms, and artisans of every sort follow. A special department keeps up the temple records, and affords a literary asylum to a few learned men.

The sacred enclosure is nearly in the form of a square, 652 feet long by 630 broad. The interior is protected from profane eyes by a massive stone wall 20 feet high. Within rise about 120 temples dedicated to the various forms in which the Hindu mind has imagined its god. But the great pagoda is the one dedicated to Jagannāth. Its conical tower rises like an elaborately carved sugar-loaf, 192 feet high and surmounted by the mystic wheel and flag of Vishnu. Outside the principal entrance, or Lion Gate, in the square where the pilgrims chiefly throng, is an exquisite monolithic pillar, which stood for centuries before the temple of the Sun at Konārak. The temple of Jagannāth consists of four chambers, communicating with each other: namely, the hall of offerings; the pillared hall for the musicians and dancing-girls; the hall of audience; and lastly the sanctuary itself, containing rude images of Jagannāth, his brother Balarām, and his sister Subhadrā. The service of the temple consists partly in a daily round of oblations, and partly in sumptuous ceremonials at stated periods throughout the year. The offerings are bloodless; but, nevertheless, within the sacred enclosure is a shrine to Bimalā, the stainless queen of the All-Destroyer, who is annually adored with bloody sacrifices.

Twenty-four festivals are held, consisting chiefly of Vaishnava commemorations, but freely admitting the ceremonials of other sects. The car festival, which takes place in June or July, is the chief event of the year. The great car is 45 feet in height and 35 feet square, and is supported on 16 wheels of 7 feet diameter. The brother and sister of Jagannāth have separate cars a few feet smaller. When the sacred images are at length brought forth and placed upon their chariots, thousands fall on their knees and bow their foreheads in the dust. The vast multitude shouts with one throat and, surging backwards and forwards, drags the wheeled edifices down the broad street, towards the country house of the god. Music

strikes up before and behind, drums beat, cymbals clash, the priests harangue from the cars, and singers engaged for the purpose chant coarse songs to induce the crowd to pull vigorously. The distance from the temple to the country house is about a mile; but as the heavy structures have no contrivance to guide them and the wheels sink into the sand which in some places covers the road, the journey sometimes takes several days. The cars are dragged from the temple to the country house by the assembled pilgrims and by some of the townspeople who hold revenue-free lands granted to them as remuneration for the work; when the pilgrims are insufficient to drag the cars back, coolies are engaged from the neighbouring villages. In 1904 the pilgrims alone pulled the cars to the country house in four hours and brought them back again to the temple without such assistance. In a closely packed eager throng of 100,000 men and women, many of them unaccustomed to exposure or labour, and all of them tugging and straining at the cars to the utmost under a blazing sun, deaths must occasionally happen. At one time several people were killed or injured every year, but these were almost invariably the result of accidental trampling. The few cases of suicide that did occur were for the most part those of diseased and miserable objects, who took this means to put themselves out of pain. The official returns place this beyond doubt. Nothing, indeed, could be more opposed to the spirit of Vishnu-worship than self-immolation. Accidental death within the temple renders the whole place unclean.

The *pāṇḍās* or temple priests employ a body of emissaries, numbering about 3,000 men, who wander from village to village within their allotted beats, preaching pilgrimage as the liberation from sin; they travel through India in this way, enlisting pilgrims and receiving a commission for so doing. Nothing can exceed the liberality of the pilgrims to their spiritual guides; but it is to be feared that this liberality is preyed upon, and that many pilgrims are in a state of destitution before the time comes for them to turn their backs upon the holy city and set their faces once more homewards. In 1902 a fund was started for the relief of destitute pilgrims. It has now been placed on a permanent basis, and is managed by a committee of five non-official and three official members. The District Magistrate is the president of the committee; Government makes an annual grant equal to the amount that is raised by subscriptions and donations, subject to a maximum of Rs. 1,000 a year. The object of the fund is to afford

relief to destitute pilgrims in the shape of travelling and diet expenses, and thus enable them to return to their homes.

The town contains several ancient tanks, which are regarded as *tirthas* or sacred places and in which the pilgrims bathe from religious motives. On its western outskirts, at a distance of about 2 miles from the Great Temple, stands the sacred temple of Loknāth, or 'Lord of Regions.' The divinity is held in very great esteem by the people of the District, and the place is largely visited.

[Sir W. W. Hunter, *Orissa*, vol. i, pp. 81-167; L. S. S. O'Malley, *District Gazetteer*, pp. 87-124.]

Satyabādī.—Village in the Khurdā subdivision of Purī District, Bengal, situated in $19^{\circ} 57' N.$ and $85^{\circ} 49' E.$ Population (1901), 1,547. It contains a shrine dedicated to Śākhī Gopāl, an incarnation of Krishna, which is visited by all pilgrims going to Purī.

Udayagiri.—Sandstone hill in the Khurdā subdivision of Purī District, Bengal, situated in $20^{\circ} 16' N.$ and $85^{\circ} 47' E.$ See KHANDGIRI.

Sambalpur District.—District of the Orissa Division, Bengal, lying between $20^{\circ} 45'$ and $21^{\circ} 57' N.$ and $82^{\circ} 38'$ and $84^{\circ} 26' E.$, with an area of 3,773 square miles. Up to 1905 the District formed part of the Chhattisgarh Division of the Central Provinces, and on its transfer to Bengal, the Phuljhar *samīndāri* and the Chandarpur-Padampur and Mālkhurdā estates, with an area of 1,175 square miles and a population (1901) of 189,455 persons, were separated from it, and attached to the Raipur and Bilāspur Districts of the Central Provinces. It is bounded on the north by the Gāngpur State of Bengal; on the east by the States of Bāmra and Rairākhōl; on the south by Patnā, Sonpur, and Rairākhōl States; and on the west by the Raipur and Bilāspur Districts of the Central Provinces.

Sambalpur consists of a core of tolerably open country, surrounded on three sides by hills and forests, but continuing on the south into the Feudatory States of Patnā and Sonpur and forming the middle basin of the Mahānadi. It is separated from the Chhattisgarh plain on the west by a range of hills carrying a broad strip of jungle, and running north and south through the Raigarh and Sārangarh States; and this range marks roughly the boundary between the Chhattisgarh and Oriyā tracts in respect of population and language. Speaking broadly, the plain country constitutes the *kāśā*, that is, the area held by village headmen direct from Government, while

Boun-
daries, con-
figuration,
and hill
and river
systems.

the wilder tracts on the west, north, and east are in the possession of intermediary proprietors known locally as *zamīndārs*. But this description cannot be accepted as entirely accurate, as some of the *zamīndāri* estates lie in the open plain, while the *khālsa* area includes to the north the wild mass of hills known as the Bārāpahār.

The Mahānadi river traverses Sambalpur from north to south-east for a distance of nearly 90 miles. Its width extends to a mile or more in flood-time, and its bed is rocky and broken by rapids over portions of its course. The principal tributary is the Ib, which enters the District from the Gāngpur State, and flowing south and west joins the Mahānadi about 12 miles above Sambalpur town. The Kelo, another tributary, passes Raigarh and enters the Mahānadi near Padampur. The Ong rises in Khariār and, passing through Borāsāmbār, flows into the Mahānadi near Sonpur. Other tributary streams are the Jīra, Borai, and Mānd. The Bārāpahār hills form a compact block 16 miles square in the north-west of the District, and throw out a spur to the south-west for a distance of 30 miles, crossed by the Raipur-Sambalpur road at the Singhorā pass. Their highest point is Debrigarh, at an altitude of 2,276 feet. Another range of importance is that of Jhārgāti, which is crossed by the railway at Rengāli station. To the southward, and running parallel with the Mahānadi, a succession of broken chains extends for some 30 miles. The range, however, attains its greatest altitude of about 3,000 feet in the Borāsāmbār *zamīndāri* in the south-west, where the Narsinghnāth plateau is situated. Isolated peaks rising abruptly from the plain are also frequent; but the flat-topped trap hills, so common a feature in most Districts to the north and west, are absent. The elevation of the plains falls from nearly 750 feet in the north to 497 at Sambalpur town. The surface of the open country is undulating, and is intersected in every direction by drainage channels leading from the hills to the Mahānadi. A considerable portion of the area consists of ground which is too broken by ravines to be banked up into rice-fields, or of broad sandy ridges which are agriculturally of very little value. The configuration of the country is exceedingly well adapted for tank-making, and the number of village tanks is one of the most prominent local features.

Geology. The Bārāpahār hills belong to the Lower Vindhyan sandstone formation, which covers so large an area in Raipur and Bilāspur. Shales, sandstones, and limestones are the prevalent rocks. In the Bārāpahār group coal-bearing sandstones are

found. The rest of the District is mainly occupied by metamorphic or crystalline rocks. Laterite is found more or less abundantly resting upon the older formations in all parts of the area.

Blocks of 'reserved' forest clothe the Bārāpahār hills in the north and the other ranges to the east and south-east, while many of the *zamīndāri* estates are also covered with jungle over the greater part of their area. The forest vegetation of Sambalpur is included in the great *sāl* belt. Other important trees are the beautiful *Anogeissus acuminata*, *sāj* (*Terminalia tomentosa*), *bījāsāl* (*Pterocarpus Marsupium*), and *shisham* (*Dalbergia Sissoo*). The light sandy soil is admirably fitted for the growth of trees, and the abundance of mango groves and clumps of palms gives the village scenery a distinct charm. The *semul* or cotton-tree (*Bombax malabaricum*) is also common in the open country.

The usual wild animals occur. Buffaloes, though rare, are found in the denser forests of the west, and bison on several of the hill ranges. *Sāmbār* are fairly plentiful. *Chital* or spotted deer, mouse deer, 'ravine deer' (gazelle), and the four-horned antelope are also found. Tigers were formerly numerous, but their numbers have greatly decreased in recent years. Leopards are common, especially in the low hills close to villages. The comparatively rare brown flying squirrel (*Pteromys oral*) is found in Sambalpur. It is a large squirrel with loose folds of skin which can be spread out like a small parachute. Duck and teal are plentiful on the tanks in the cold season, and snipe in the stretches of irrigated rice-fields below the tanks. Flocks of demoiselle cranes frequent the sandy stretches of the Mahānadi at this time. Fish of many kinds, including mahseer, abound in the Mahānadi and other rivers. Poisonous snakes are very common.

The climate of Sambalpur is moist and unhealthy. The ordinary temperature is not excessive, but the heat is aggravated at Sambalpur town during the summer months by radiation from the sandy bed of the Mahānadi. During breaks in the rains the weather at once becomes hot and oppressive, and though the cold season is pleasant it is of short duration. Malarial fever of a virulent type prevails in the autumn months, and diseases of the spleen are common in the forest tracts.

The annual rainfall at Sambalpur town averages 59 inches; that of Bargarh is much lighter, being only 49 inches. Taking the District as a whole, the monsoon is generally regular.

Sambalpur is in the track of cyclonic storms from the Bay of Bengal, and this may possibly be assigned as the reason.

History. The earliest authentic records show Sambalpur as one of a cluster of States held by Chauhān Rājputs, who are supposed to have come from Mainpurī in the United Provinces. In 1797 the District was conquered and annexed by the Marāthās; but owing to British influence the Rājā was restored in 1817, and placed under the political control of the Bengal Government. On the death of a successor without heirs in 1849 the District was annexed as an escheat, and was administered by the Bengal Government till 1862, when it was transferred to the Central Provinces. During the Mutiny and the five years which followed it, the condition of Sambalpur was exceedingly unsatisfactory, owing to disturbances led by Surendra Sāh, a pretender to the State, who had been imprisoned in the Rānchī jail for murder, but was set free by the mutineers. He returned to Sambalpur and instigated a revolt against the British Government, which he prosecuted by harassing the people with dacoities. He was joined by many of the *samīndārs*, and it is not too much to say that for five years the District was in a state of anarchy. Surendra Sāh was deported in 1864 and tranquillity restored.

Archaeology. The archaeological remains are not very important. There are temples at Barpālī, Gaisāma (25 miles south-west of Sambalpur), Padampur in Borāsāmbār, Garh-Phuljhar, and Sāson, which are ascribed to ancestors of the Sambalpur dynasty and of the respective *samīndārs*. The Narsinghnāth plateau in the south of the Borāsāmbār *samīndārī* is locally celebrated for its temple and the waterfall called Sahasra Dhāra or 'thousand streams,' which is extremely picturesque. Hūma on the Mahānadī, 15 miles below Sambalpur town, is another place of pilgrimage. It is situated at the junction of a small stream, called the Jholjir, with the Mahānadī, and contains a well-known temple of Mahādeo.

The people. The population of the District at the three enumerations was as follows: (1881) 693,499, (1891) 796,413, and (1901) 829,698. On the transfer of territory in 1905 the population was reduced to 640,243 persons. Between 1881 and 1891 the increase was nearly 15 per cent., the greater part of which occurred in the *samīndārīs*, and must be attributed to greater efficiency of enumeration. The District had a half-crop in 1897 and there was practically no distress; but in 1900 it was severely affected, and the mortality was augmented by a large influx of starving wanderers from native territory. The District

furnishes coolies for Assam, and it is estimated that nearly 12,000 persons emigrated during the decade. There is only one town, SAMBALPUR, and 1,938 inhabited villages.

The principal statistics of population, based on the Census of 1901, are given below :—

Tahsil	Area in square miles	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write.
		Towns.	Villages				
Sambalpur	1,489	1	766	275,302	185	+ 7.6	6,013
Bargarh	2,284	...	1,172	364,941	160	+ 0.1	6,836
District total	3,773	1	1,938	640,243	170	+ 3.2	12,849

The figures for religion show that nearly 583,000 persons, or 91 per cent. of the population, are Hindus, and 54,000, or 8 per cent., Animists. Muhammadans number only about 3,000. Oriyā is the vernacular of 89 per cent. of the population. A number of tribal dialects are also found, the principal being Oraon with nearly 25,000 speakers, Kol with 11,000, and Khariā with 5,000.

The principal castes are Gonds (constituting 8 per cent. of the population), Koltās (11 per cent.), Savaras (9 per cent.), Gahrās or Ahirs (11 per cent.), and Gāndas (13 per cent.). Of the sixteen *zamīndārī* estates, ten are held by Rāj Gonds; two, Rājpur and Barpālī, by Chauhān Rājputs; one, Rāmpur, by another Rājput; two, Borāsāmbār and Ghens, by Binjhāls; and one, Bijepur, by a Koltā. The Gond families are ancient; and their numbers seem to indicate that previous to the Oriyā immigration they held possession of the country, subduing the Mundā tribes who were probably there before them. A trace of the older domination of these is to be found in the fact that the Binjhāl *zamīndār* of Borāsāmbār still affixes the *tika* to the Mahārājā of Patnā on his accession. Koltās are the great cultivating caste, and have the usual characteristics of frugality, industry, hunger for land, and readiness to resort to any degree of litigation rather than relinquish a supposed right to it. They strongly appreciate the advantages of irrigation, and show considerable public spirit in constructing tanks which will benefit the lands of their tenants as well as their own. The Savaras or Saonrs of Sambalpur, though a Dravidian tribe, live principally in the open country and have adopted Hindu usages. They are considered the best farm-servants and are very laborious, but rarely acquire any property. Brāhmans

Castes and occupations.

(28,000), though not very numerous, are distinctly the leading caste in the District. The Binjhāls (39,000) are probably Hinduized Baigās, and live principally in the forest tracts. Kewats (38,000), or boatmen and fishermen, are a numerous caste. The Gāndas (105,000), a Dravidian tribe now performing the menial duties of the village or engaging in cotton-weaving, have strong criminal propensities which have recently called for special measures of repression. About 78 per cent. of the population of the District are returned as dependent on agriculture. A noticeable feature of the rural life of Sambalpur is that the *jhānkar*, or village priest, is a universal and recognized village servant of fairly high status. He is nearly always a member of one of the Dravidian tribes, and his business is to conduct the worship of the local deities of the soil, crops, forests, and hills. He generally has a substantial holding, rent free, containing some of the best land in the village. It is said locally that the *jhānkar* is looked on as the founder of the village, and the representative of the old owners who were ousted by the Hindus. He worships on their behalf the indigenous deities, with whom he naturally possesses a more intimate acquaintance than the later immigrants; while the gods of these latter cannot be relied on to exercise a sufficient control over the works of nature in the foreign land to which they have been imported, or to ensure that the earth and the seasons will regularly perform their necessary functions in producing sustenance for mankind.

Christian
missions.

Christians number 722, including 575 natives, of whom the majority are Lutherans and Baptists. A station of the Baptist Mission is maintained at Sambalpur town.

General
agricul-
tural con-
ditions.

The black soil which forms so marked a feature in the adjoining Central Provinces is almost unknown in Sambalpur. It occurs in the north-west of the District, beyond the cross range of Vindhyan sandstone which shuts off the Ambābhonā *pargana*, and across the Mahānadī towards the Bilāspur border. The soil which covers the greater part of the country is apparently derived from underlying crystalline rocks, and the differences found in it are due mainly to the elimination and transportation effected by surface drainage. The finer particles have been carried into the low-lying areas along drainage lines, rendering the soil there of a clayey texture, and leaving the uplands light and sandy. The land round Sambalpur town, and a strip running along the north bank of the Mahānadī to the confines of Bilāspur District, is the most productive, being fairly level, while the country over the greater part of the

Bargarh *tahsil* has a very decided slope, and is much cut up by ravines and watercourses. Nearly all the rice is sown broadcast, only about 4 per cent. of the total area being transplanted. For thinning the crop and taking out weeds, the fields are ploughed up when the young plants are a few inches high, as in Chhattisgarh. A considerable proportion of the area under cultivation, consisting of high land which grows crops other than rice, is annually left fallow, as the soil is so poor that it requires periodical rests.

¹ No less than 235 square miles are held revenue free or on low quit-rents, these grants being either for the maintenance of temples or gifts to Brāhmins, or assignments for the support of relatives of the late ruling family. The *samīndāri* estates cover 48 per cent. of the total area of the District, 109 acres are held *ryotwāri*, and the balance on the tenures described below (p. 320). In 1903-4, 396 square miles, or 9 per cent. of the total area, were included in Government forests; 290 square miles, or 7 per cent., were classed as not available for cultivation; and 1,102 square miles, or 26 per cent., as cultivable waste other than fallow. The remaining area, amounting to about 2,443 square miles, or nearly 64 per cent. of that of the District, excluding Government forests, was occupied for cultivation. In the more level parts of the open country cultivation is close, but elsewhere there seems to be still some room for expansion. Rice is the staple crop of Sambalpur, covering 1,355 square miles in 1903-4. Other crops are *tīl* or sesamum (158 square miles), the pulse *urad* (145), and *kodon* (94). Nearly 12,000 acres are under cotton and 4,400 under sugar-cane. The pulses are raised on the inferior high-lying land without manure, the out-turn in consequence being usually very small. The pulse *kulthī* (*Dolichos uniflorus*) covers 56 square miles. Cotton and *tīl* are also grown on this inferior land. Sugar-cane was formerly a crop of some importance; but its cultivation has decreased in recent years, owing to the local product being unable to compete in price with that imported from Northern India.

The harvests have usually been favourable in recent years, and the cropped area steadily expanded up to 1899, when the famine of 1900 caused a temporary decline. New tanks have also been constructed for irrigation, and manure is now utilized to a larger extent. During the decade ending 1904, a total of

¹ The figures in this paragraph refer to the area of the District as it stood before the transfer of Phuljar, Chandarpur-Padampur, and Mālkurdā, revised statistics of cultivation not being available.

Chief agri-
cultural
statistics
and princi-
pal crops.

Improve-
ments in
agricul-
tural
practice.

Rs. 77,000 was advanced under the Land Improvement Loans Act, and Rs. 68,000 under the Agriculturists' Loans Act.

Irrigation. In 1903-4 the irrigated area was only 31 square miles, but in the previous year it had been over 196, being the maximum recorded. With the exception of 12 square miles under sugar-cane and garden produce, the only crop irrigated is rice. The suitability of the District for tank-making has already been mentioned, and it is not too much to say that the very existence of villages over a large portion of the area is dependent on the tanks which have been constructed near them. There are 9,500 irrigation tanks, or between three and four to every village in the District on an average. The ordinary Sambalpur tank is constructed by throwing a strong embankment across a drainage line, so as to hold up an irregularly shaped sheet of water. Below the embankment a four-sided tank is excavated, which constitutes the drinking supply of the village. Irrigation is generally effected by leading channels from the ends of the embankment, but in years of short rainfall the centre of the tank is sometimes cut through. Embankments of small size are frequently thrown across drainage channels by tenants for the benefit of their individual holdings. The Jambor and Sarsutiā nullahs near Machidā are perennial streams, and the water is diverted from them by temporary dams and carried into the fields. In certain tracts near the Mahānadi, where water is very close to the surface, temporary wells are also sometimes constructed for the irrigation of rice. Irrigation from permanent wells is insignificant. Several projects for new tanks have been prepared by the Irrigation department.

Cattle, &c. The cattle of the District are miserably poor, and no care is exercised in breeding. As the soil is light and sandy, however, strong cattle are not so requisite here as elsewhere. For draught purposes larger animals are imported from Berār. Buffaloes are largely used for cultivation. They are not as a rule bred locally, but imported from the northern Districts through Bilāspur and Surgujā. Those reared in the District are distinctly inferior. Buffaloes are frequently also used for draught, and for pressing oil and sugar-cane. Only a few small ponies are bred in the District for riding. Goats and sheep are kept by the lower castes for food only. Their manure is also sometimes used, but does not command a price. There are no professional shepherds, and no use is made of the wool of sheep.

Forests. The total area of 'reserved' forests is 396 square miles.

They are situated on the Bārāpahār hills in the north of the Bargarh *tahsīl*, and on the ranges in the west and south-west of the Sambalpur *tahsīl*. There are two types of forest, the first consisting of the *sāl* tree interspersed with bamboos and other trees, and the second or mixed forest of bamboos and inferior species. *Sāl* forest occupies all the hills and valleys of the Sambalpur range, and the principal valleys of the Bārāpahār range, or an area of about 238 square miles. It thrives best on well-drained slopes of sandy loam. The mixed forest is situated on the rocky dry hills of the Bārāpahār range, where *sāl* will not grow, and covers 155 square miles. The forest revenue in 1903-4 was Rs. 34,000, of which about Rs. 12,000 was realized from the sale of bamboos, Rs. 10,000 from timber, Rs. 3,600 from grazing dues, and Rs. 5,000 from firewood.

The Rāmpur coal-field is situated within the District Minerals. Recent exploration has resulted in the discovery of one seam of good steam coal and two of rather inferior quality within easy reach of the Bengal-Nāgpur Railway. The former, known as the Ib Bridge seam, contains coal more than 7 feet in thickness. Two samples which have been analysed yielded 52 and 55 per cent. respectively of fixed carbon. Iron ores occur in most of the hilly country on the borders of the District, particularly in the Borāsāmbār, Phuljhar¹, Kolābūrā, and Rāmpur *zamīndāris*. Some of them are of good quality, but they are worked by indigenous methods only. There are 160 native furnaces, which produce about 1,120 cwt. of iron annually. When Sambalpur was under native rule diamonds were obtained in the island of Hīrākud ('diamond island') in the Mahānadi. The Jhariās or diamond-seekers were rewarded with grants of land in exchange for the stones found by them. The right to exploit the diamonds, which are of very poor quality, was leased by the British Government for Rs. 200, but the lessee subsequently relinquished it. Gold in minute quantities is obtained by sand-washing in the Ib river. Lead ores have been found in Talpatīā, Jhūnan, and Padampur², and antimony in Junāni opposite Hīrākud. Mica exists, but the plates are too small to be of any commercial value.

Tasar silk-weaving is an important industry in Sambalpur. The cocoons are at present not cultivated locally, but are imported from Chotā Nāgpur and the adjoining States. Plain and drilled cloth is woven. Remendā, Barpālī, Chandarpur², and Sambalpur are the principal centres. A little cloth is sent

Arts and
manufac-
tures.

¹ Now in Raipur District, Central Provinces.

² Now in Bilaspur District, Central Provinces.

to Ganjām, but the greater part is sold locally. Cloths of cotton with silk borders, or intermixed with silk, are also largely woven. Bhuliās and Koshtās are the castes engaged, the former weaving only the prepared thread, but the latter also spinning it. Cotton cloth of a coarse texture, but of considerable taste in colour and variety of pattern, is also woven in large quantities, imported thread being used almost exclusively. It is generally worn by people of the District in preference to mill-woven cloth. A large bell-metal industry exists at Tukrā near Kādobahāl, and a number of artisans are also found at Remendā, Barpālī, and Bijepur. Brass cooking and water pots are usually imported from Orissa. The iron obtained locally is used for the manufacture of all agricultural implements except cart-wheel tires. Smaller industries include the manufacture of metal beads, saddles, and drums.

Commerce. Rice is the staple export of Sambalpur, being sent principally to Calcutta, but also to Bombay and Berār. Other exports include oilseeds, sleepers, dried meat, and *san*-hemp. Salt comes principally from Ganjām, and is now brought by rail instead of river as formerly. Sugar is obtained from Mirzāpur and the Mauritius, and *gur* or unrefined sugar from Bengal. Kerosene oil is brought from Calcutta, and cotton cloth and yarn from Calcutta and the Nāgpur mills. Silk is imported from Berhampur. Wheat, gram, and the pulse *arhar* are also imported, as they are not grown locally in sufficient quantities to meet the demand. The weekly markets at Sambalpur and Bargarh are the most important in the District. Bhuktā, near Ambābhonā, is the largest cattle fair; and after it rank those of Bargarh, Saraipālī, and Talpatīā. Jāmurla is a large mart for oilseeds; Dhāma is a timber market; and Bhikhampur and Talpatīā are centres for the sale of country iron implements. A certain amount of trade in grain and household utensils is transacted at the annual fairs of Narsinghnāth and Hūma.

Railways and roads. The main line of the Bengal-Nāgpur Railway passes for a short distance through the north-east of the District, with a length of nearly 30 miles and three stations. From Jhārsugrā junction a branch line runs to Sambalpur town, 30 miles distant, with three intervening stations. The most important trade route is the Raipur-Sambalpur road, which passes through the centre of the Bargarh *tahsil*. Next to this come the Cuttack road down to Sonpur, and the Sambalpur-Bilāspur road. None of these is metalled throughout, but the Raipur-Sambalpur road is embanked and gravelled. The District has 27 miles of

metalled and 185 of unmetalled roads, and the expenditure on maintenance is Rs. 24,000. The Public Works department is in charge of 115 miles and the District council of 97 miles of road. There are avenues of trees on 68 miles. The Mahānadi river was formerly the great outlet for the District trade. Boat transport is still carried on as far as Sonpur, but since the opening of the railway trade with Cuttack by this route has almost entirely ceased. Boats can ascend the Mahānadi as far as Arang in Raipur, but this route is also little used owing to the dangerous character of the navigation.

Sambalpur is recorded as having suffered from partial failures ^{Famine.} of crops in 1834, 1845, 1874, and 1877-8, but there was nothing more than slight distress in any of those years. In 1896 the rice crop failed over a small part of the District, principally in the Chandarpur *samīndāri*, and some relief was administered there. The numbers, however, never rose to 3,000, while in the rest of the District agriculturists made large profits from the high prices prevailing for rice. The year 1900 was the first in which there is any record of serious famine. Owing to the short rainfall in 1899, a complete failure of the rice crop occurred over large tracts of the District, principally in the north and west. Relief operations extended over a whole year, the highest number relieved being 93,000 in August, 1900, or 12 per cent. of the population; and the total expenditure was 8 lakhs.

The Deputy-Commissioner has a staff of three Assistant or Deputy-Collectors, and a Sub-Deputy-Collector. For administrative purposes the District is divided into two *tahsils*, Sambalpur and Bargarh, each having a *tahsildār* and Bargarh also a *naib-tahsildār*. The Forest officer is generally a member of the Provincial service. District subdivisions and staff.

The civil judicial staff consists of a District and two Sub-ordinate Judges, and a Munsif at each *tahsil*. Sambalpur is included in the Sessions Division of Cuttack. The civil litigation has greatly increased in recent years, and is now very heavy. Transactions attempting to evade the restrictions of the Central Provinces Tenancy Act on the transfer of immovable property are a common feature of litigation, as also are easement suits for water. The crime of the District is not usually heavy, but the recent famine produced an organized outbreak of dacoity and housebreaking. Civil and criminal justice.

Under native rule the village headmen, or *gaontīās*, were responsible for the payment of a lump sum assessed on the village for a period of years, according to a lease which was Land revenue.

periodically revised and renewed. The amount of the assessment was recovered from the cultivators, and the headmen were remunerated by holding part of the village area free of revenue. The headmen were occasionally ejected for default in the payment of revenue, and the grant of a new lease was often made an opportunity for imposing a fine which the *gaontīā* paid in great part from his own profits, and did not recover from the cultivators. The cultivators were seldom ejected except for default in the payment of revenue, but they rendered to their *gaontīās* a variety of miscellaneous services known as *bhetī bigāri*. Taxation under native rule appears to have been light. When the District escheated to the British Government, the total land revenue of the *khālsa* area was about a lakh of rupees, nearly a quarter of which was alienated. Short-term settlements were made in the years succeeding the annexation, till on the transfer of the District to the Central Provinces in 1862 a proclamation was issued stating that a regular long-term settlement would be made, at which the *gaontīās* or hereditary managers and rent-collectors of villages would receive proprietary rights. The protracted disturbances caused by the adherents of Surendra Sāh, however, prevented any real progress being made with the survey; and this gave time for the expression of an opinion by the local officers that the system of settlement followed in other Districts was not suited to the circumstances of Sambalpur. After considerable discussion, the incidents of land tenures were considerably modified in 1872. The *gaontīās* or hereditary managers received proprietary rights only in their *bhogrā* or home-farm land, which was granted to them free of revenue in lieu of any share or drawback on the rental paid by tenants. Waste lands and forests remained the property of Government; but the *gaontīās* enjoy the rental on lands newly broken up during the currency of settlement. A sufficiency of forest land to meet the necessities of the villagers was allotted for their use, and in cases where the area was in excess of this it was demarcated and set apart as a fuel and fodder reserve. Occupancy right was conferred on all tenants except subtenants of *bhogrā*. The system was intended to restrict the power of alienation of land, the grant of which had led to the expropriation of the agricultural by the money-lending castes, and the same policy has recently received expression in the Central Provinces Tenancy Act of 1898. A settlement was made for twelve years in 1876, by which the revenue demand was raised to 1.16 lakhs, the net revenue, excluding assign-

ments, being Rs. 93,000. On the expiry of this settlement, the District was again settled between 1885 and 1889, and the assessment was raised to 1.59 lakhs, or by 38 per cent. The revenue incidence per acre was still extremely low, falling at only R. 0-3-11 (maximum R. 0-8-10, minimum R. 0-2) excluding the *zamīndāris*. The term of this settlement varied from fourteen to fifteen years. It expired in 1902 and the District is again under settlement.

The collections of land revenue and total revenue have varied as shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4
Land revenue. .	1,15	1,59	1,96	1,73
Total revenue. .	2,57	3,73	4,41	4,49

The management of local affairs, outside the municipal area of SAMBALPUR TOWN, is entrusted to a District council and four local boards, one each for the northern and southern *zamīndāri* estates, and one for the remaining area of each *tahsīl*. The income of the District council in 1903-4 was Rs. 55,000, while the expenditure on education was Rs. 24,000. Local boards and municipalities.

The police force consists of 492 officers and men, including a special reserve of 25, and 3 mounted constables, besides 2,765 watchmen for 2,692 inhabited towns and villages. The District Superintendent sometimes has an Assistant. Special measures have recently been taken to improve the efficiency of the police force, by the importation of subordinate officers from other Districts. Sambalpur town has a District jail with accommodation for 187 prisoners, including 24 females. The daily average number of prisoners in 1904 was 141. Police and jails.

In respect of education the District is very backward. Only 3.3 per cent. of the male population were able to read and write in 1901, and but 400 females were returned as literate. The proportion of children under instruction to those of school-going age is 6 per cent. Statistics of the number of pupils under instruction are as follows: (1880-1) 3,266, (1890-1) 7,145, (1900-1) 4,244, (1903-4) 9,376. The last figure includes 2,366 girls, a noticeable increase having lately been made. The educational institutions comprise a high school at Sambalpur town, an English middle school, 6 vernacular middle schools, and 120 primary schools. Primary classes and masters are attached to two of the middle schools. There are six Government girls' schools in the District. A small school for the depressed tribes has been opened by Education.

missionaries. Oriyā is taught in all the schools. The District is now making progress in respect of education, a number of new schools having been opened recently. The total expenditure in 1903-4 was Rs. 40,000, of which Rs. 35,000 was provided from Provincial and Local funds and Rs. 4,700 by fees.

Medical. The District has seven dispensaries, with accommodation for 62 in-patients. In 1904 the number of cases treated was 85,840, of whom 836 were in-patients, and 1,999 operations were performed. The total expenditure was Rs. 10,700.

Vaccination. Vaccination is compulsory only in the municipal town of Sambalpur. The number of persons successfully vaccinated in 1903-4 was 45 per 1,000 of the District population.

[J. B. Fuller, *Settlement Report* (1891). A District Gazetteer is being compiled.]

Sambalpur Tahsīl.—Eastern *tahsīl* of the District of the same name, Bengal, lying between $21^{\circ} 8'$ and $21^{\circ} 57'$ N. and $83^{\circ} 26'$ and $84^{\circ} 26'$ E., with an area, in 1901, of 1,822 square miles. The population in that year was 362,622, compared with 344,391 in 1891. In 1905 the Chandarpur-Padampur and Mālkurdā estates, with an area of 333 square miles and a population of 87,320, were transferred to the Bilāspur District of the Central Provinces; and the revised figures of area and population of the *tahsīl* are 1,489 square miles and 275,302 persons. The density is 185 persons per square mile. The *tahsīl* contains one town, SAMBALPUR (population, 12,870), the District and *tahsīl* head-quarters; and 766 inhabited villages. Excluding 190 square miles of Government forest, 56 per cent. of the available area is occupied for cultivation. The cultivated area in 1903-4 was 851 square miles. The demand for land revenue in the same year was Rs. 68,000, and for cesses Rs. 14,000. The *tahsīl* consists of a strip of open country along the left bank of the Mahānadi, flanked to the east and south by hills. It contains seven *zamīndāri* estates, with a total area of 614 square miles.

Bargarh.—Western *tahsīl* of Sambalpur District, Bengal, lying between $20^{\circ} 45'$ and $21^{\circ} 44'$ N. and $82^{\circ} 38'$ and $83^{\circ} 54'$ E., with an area, in 1901, of 3,126 square miles. The population in that year was 467,076, compared with 452,022 in 1891. In 1905 the Phuljhar *zamīndāri*, with an area of 842 square miles and a population of 102,135 persons, was transferred to the Raipur District of the Central Provinces; and the adjusted figures of area and population of the *tahsīl* are 2,284 square miles and 364,941 persons. The density is 160 persons per square mile. The *tahsīl* contains 1,172

inhabited villages. Bargarh, the head-quarters, is a village of 3,609 inhabitants, 29 miles distant from Sambalpur town on the Raipur road. Excluding 206 square miles of Government forest, 69 per cent. of the available area is occupied for cultivation. The cultivated area in 1903-4 was 1,403 square miles. The demand for land revenue in the same year was Rs. 1,06,000, and for cesses Rs. 21,000. The *tahsīl* comprises an open tract along the right bank of the Mahānadī, flanked by hill and forest country to the west and north. It contains nine *zamīndārī* estates, with a total area of 1,204 square miles.

Sambalpur Town.—Head-quarters of the District of the same name, Bengal, situated in $21^{\circ} 28' N.$ and $83^{\circ} 58' E.$ It is the terminus of a branch line of the Bengal-Nāgpur Railway, 30 miles from Jhārsugrā junction, and 349 from Calcutta. The town lies along the left bank of the Mahānadī, and is very picturesquely situated, commanding a beautiful view of the river for several miles, with wooded hills in the background. In flood-time the width of the Mahānadī is more than a mile, and portions of the town have been submerged on one or two occasions, but during most of the year there is only a stream 40 or 50 yards wide. During the open season a pontoon bridge over the Mahānadī is maintained by the Bengal-Nāgpur Railway, giving place to a ferry in the monsoon months. The population in 1901 was 12,870, and has risen by more than 30 per cent. since 1891. The town derives its name from the Somlai Devī, its tutelary deity. There are no buildings of importance; but the Brahmapurā temple of Jagannāth has a great reputation for sanctity, and many civil suits are decided by the oaths of parties taken at this shrine. Sambalpur was constituted a municipality in 1867. The municipal receipts and expenditure during the decade ending 1901 averaged Rs. 28,000 and Rs. 29,000 respectively. In 1903-4 the income had risen to Rs. 48,000, mainly derived from octroi. A wing of a Native infantry regiment was stationed here until 1902. Sambalpur is the commercial centre for most of the District, and also the States of Sonpur, Patnā, and Rairākhhol. It contains a *dépôt* for cooly emigrants to Assam. The principal industries are the weaving of *tasar* silk and cotton cloth by hand. A printing press with Oriyā and English type was established in 1902, to celebrate the restoration of Oriyā as the court language of Sambalpur. The town possesses a high school with a boarding-house and 33 pupils, a girls' school, and Oriyā and Hindī branch schools. It also has a main dispensary and a police hospital.

CHOTĀ NĀGPUR DIVISION

Chotā Nāgpur Division.—A Division of Bengal, lying between $21^{\circ} 58'$ and $24^{\circ} 49'$ N. and $83^{\circ} 20'$ and $86^{\circ} 54'$ E. The head-quarters of the Division are at RĀNCHĪ, and it includes five Districts, with area, population, and revenue as shown below —

District.	Area in square miles.	Population, 1901.	Demand for land revenue and cesses, 1903-4, in thousands of rupees
Hazāribāgh . . .	7,021	1,177,961	2,46
Rānchī	7,128	1,187,925	1,65
Palāmau	4,914	619,600	1,71
Mānbhūm	4,147	1,301,364	2,22
Singhbhūm	3,891	613,579	1,64
Total	27,101	4,900,429	9,68

NOTE.—In the Report of the Census of 1901 the area of Singhbhūm was shown as 3,753 square miles. The figure given above was supplied by the Surveyor-General.

After the suppression of the Kol rebellion of 1831-2 this tract was exempted by Regulation XIII of 1833 from the operation of the general laws and regulations, and every branch of the administration was vested in an officer appointed by the Supreme Government and styled the Agent to the Governor-General, South-West Frontier. In 1854 the designation of the province was changed to Chotā Nāgpur by Act XX of that year; and it has been administered since that date as a non-regulation province under the Lieutenant-Governor of Bengal, the title of the chief executive officer being at the same time changed to Commissioner, and that of officers in charge of Districts to Deputy-Commissioner. The Commissioner exercises general control over the small Chotā Nāgpur States of Kharsāwān and Saraikelā.

The so-called Chotā Nāgpur plateau extends beyond the limits of the Division into the Tributary States of Chotā Nāgpur and Orissa on the south-west and south, and through the Santāl Parganas to the Ganges on the north-east, while its

outlying fringes stretch out into the south of the Patna and Bhāgalpur Divisions on the north and into the west of the Burdwān Division on the east. The word 'plateau' is used, for want of a better designation, for this tract of elevated country, and is not intended to imply that the area referred to forms an open table-land like that to the north of Cape Colony. There are three plateaux in the stricter acceptation of the term, one in Rānchī and two in Hazāribāgh. Elsewhere the country is often very broken, and numerous ranges or groups of steep hills are intersected by deep ravines and occasionally by open valleys. The geological formation is gneiss, freely interbedded with micaceous, siliceous, and horn-blendic schists, passing into transition or metamorphic rocks in West Bengal and South Bihār.

The recorded population increased from 3,147,699 in 1872 to 4,225,989 in 1881 and 4,628,792 in 1891; but the earlier enumerations were defective. The density is 181 persons per square mile, compared with 438 for Bengal as a whole. In 1901 Hindus constituted 68·5 per cent. of the total population, Muhammadans 5·7 per cent., Christians (of whom all except 1,191 were natives) 2·9 per cent., and Animists 22·7 per cent., while among the remainder were 853 Jains. The Division is the home of numerous non-Aryan tribes, who were never completely subjugated either by the early Aryan invaders or by the Pathān and Mughal emperors, or indeed by any outside power until the advent of the British. They have thus preserved in their mountain fastnesses an individuality in respect of tribal organization, religion, and language which their congeners in the plains have long since lost. They are gradually abandoning their tribal dialects in favour of the nearest Aryan form of speech, Hindī to the north and west, Oriyā to the south, and Bengali to the east; but a large number still speak their own languages, which are divided by philologists into two great families, the Mundā and the Dravidian. This distinction, however, is merely an indication of some earlier political condition, and does not represent any corresponding divergence of physical type. The most distinctive of the tribes represented are the Santāls (*see* SANTĀL PARGANAS) in Hazāribāgh, Mānbhūm, and Singhbhūm, the MUNDĀS in Rānchī, the ORAONS in Rānchī and the Tributary States, the Hos in Singhbhūm, the BHUMIJ in Mānbhūm and Singhbhūm, and the Gonds in the Tributary States. A remarkable increase in the number of Christians took place during the decade ending 1901, due principally to new conversions in Rānchī, where Christians

numbered 124,958, compared with only 75,693 ten years previously. The German Lutheran missionaries have here met with great success; and the District is also a great centre of Roman Catholic missionary enterprise, containing three-fifths of the total number of their converts in Bengal.

The Division contains 13 towns and 23,876 villages. RĀNCHĪ (25,970) is the only town with a population exceeding 20,000 inhabitants. Chotā Nāgpur possesses great mineral wealth, especially in respect of coal, the principal fields being the Gīridih coal-field in Hazāribāgh, the Jherriā coal-field chiefly in Mānbhūm, and the Daltonganj coal-field in Palāmau. The output of coal and coke in 1903 was 3,329,000 tons. Mica is mined in Hazāribāgh, and 547 tons were produced in 1903. The Jain temples at PARASNĀTH Hill yearly attract thousands of pilgrims; other interesting antiquities are the ruins of a fort at PĀNCHET and of temples at several places in Mānbhūm District.

Boun-
daries, con-
figuration,
and hill
and river
systems.

Hazāribāgh District.—North-eastern District in the Chotā Nāgpur Division of Bengal, lying between $23^{\circ} 25'$ and $24^{\circ} 49'$ N. and $84^{\circ} 27'$ and $86^{\circ} 34'$ E., with an area of 7,021 square miles. It is bounded on the north by the Districts of Gayā and Monghyr; on the east by the Santāl Parganas and Mānbhūm; on the south by Rānchī; and on the west by Palāmau.

Hazāribāgh, which, like the rest of Chotā Nāgpur, consists to a great extent of rock and ravine, lies towards the north-eastern extremity of the chain of high land, sometimes a range of hills and sometimes a cultivated plateau, which extends across the continent of India south of the Narbadā river on the west and of the Sōn river on the east. It is divided naturally into three distinct tracts: an undulating plateau, with an average elevation of about 2,000 feet, extends from the west-central boundary of the District, measuring about 40 miles in length from east to west and 15 miles from north to south; a lower and more extensive plateau, with a general elevation of 1,300 feet, covers the north and east of the District, gradually sinking towards the east; while the central valley of the Dāmodar river, with the country watered by its numerous feeders, occupies the entire south of the District. The principal peaks of the southern plateau are Barāgai or MARANG BURU (3,445 feet above the sea), Jilingā (3,057 feet), Chendwār (2,816 feet), and Aswa (2,463 feet). Detached hills are LUGU (3,203 feet), MĀHUDI (2,437 feet), and in the east of the District, on the boundary of Mānbhūm, the well-known PARASNĀTH Hill, 4,480 feet above

the sea. In the northern plateau is the MAHĀBAR range, rising to an elevation of 2,210 feet above sea-level. The DĀMODAR, which rises in Palāmau, is the most important river of Hazāribāgh, through which it flows in an easterly direction for about 90 miles. Its chief feeders in this portion of its course are the Garhi, Haharo, Naikāri, Maramarhā, Bherā, Kunur, Khanjo, and Jamuniā, and with its tributaries it drains in this District an area of 2,840 square miles; it is everywhere fordable during the dry season. The only other important river, the BARĀKAR, rises on the northern face of the central plateau and flows in an easterly and south-easterly direction till, after draining an area of 2,050 square miles, it leaves the District to form the boundary between Mānbhūm and the Santāl Parganas. The north-west of the District is drained by the Jhikiā and Chako, which unite a short distance outside the boundary; by the Mohanī, Lilājān, and Morhar, which flow northwards into Gayā; and by the Dhādhār, Tilayā, and Sakri. The Ajay rises on the eastern boundary of the District, two of its tributaries draining part of the Gīrīdh subdivision, while on the south the SUBARNAREKHĀ forms the District boundary for about 15 miles.

A description of the geology of Hazāribāgh District would Geology. practically be a summary of the characters of any Archaean area. The old felspathic gneisses, well banded and with the composition of typical igneous rocks, are associated with schistose forms and with the results of the intermingling of ancient sediments with igneous matter. Among these are intrusive masses of granite which, under pressure, have assumed a gneissose structure and, on account of the way in which they stand up as small hills of rounded hummocks, have sometimes been referred to as the 'dome gneiss.' They rise up in the midst of bands of schists, which are cut in all directions by veins of acid pegmatite. Patches of Gondwāna rocks occur, some of which contain the coal for which the District is well-known¹.

The narrower valleys are often terraced for rice cultivation, Botany. and these rice-fields and their margins abound in marsh and water plants. The surface of the plateau between the valleys, where level, is often bare and rocky, but where undulating is usually clothed with a dense scrub jungle in which *Dendro-*

¹ 'The Mica Deposits of India,' by Holland, in *Memoirs, Geological Survey of India*, vol. xxxiv, part ii (1902); 'The Igneous Rocks of Gīrīdh and their Contact Effects,' by Holland and Saise, in *Records, Geological Survey of India*, vol. xxviii, part iv (1895).

calamus strictus is prominent. The steep slopes of the *ghāts* are covered with a dense forest mixed with many climbers. *Sāl* (*Shorea robusta*) is gregarious; among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, *Adina*, which these forests share with the similar forests on the Lower Himālayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soymida*, *Boswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain. One of the features of the upper edge of the *ghāts* is a dwarf palm, *Phoenix acaulis*. Striking too is the wealth of scarlet blossom in the hot season produced by the abundance of *Butea frondosa* and *B. superba*, and the mass of white flower along the *ghāts* in November displayed by the convolvulaceous climber *Porana paniculata*.

Fauna. The jungles in the less cultivated tracts give shelter to tigers, leopards, bears, and several varieties of deer. Wolves are very common, and wild dogs hunt in packs on Parasnāth Hill.

Temperature and rainfall. The temperature is moderate except during the hot months of April, May, and June, when westerly winds from Central India cause high temperature with very low humidity. The mean temperature increases from 76° in March to 85° in April and May, the mean maximum from 89° in March to 99° in May, and the mean minimum from 64° to 76°. During these months humidity is lower in Chotā Nāgpur than in any other part of Bengal, falling in Hazāribāgh to 41 per cent. in March and 36 per cent. in April. In the winter season the mean temperature is 60° and the mean minimum 51°. The annual rainfall averages 53 inches, of which 7.6 inches fall in June, 14.4 in July, 13.4 in August, and 8.5 in September.

History. The whole of the Chotā Nāgpur plateau was known in early history as Jhārkand or 'the forest tract,' and appears never to have been completely subjugated by the Muhammadans. Santāl tradition relates that one of their earliest settlements was at Chhai Champā in Hazāribāgh, and that their fort was taken by Saiyid Ibrāhīm Alī, a general of Muhammad bin Tughlak, and placed in charge of a Muhammadan officer, circa 1340. There is no authentic record, however, of any invasion of the country till Akbar's reign, when it was overrun by his general. The Rājā of Chotā Nāgpur became a tributary of the Mughal government (1585); and in the *Ain-i-Akbarī* Chhai Champā is shown as a *pargana* belonging to

Bihār assessed at Rs. 15,500, and liable to furnish 20 horse and 600 foot. Subsequently, in 1616, the Rājā fell into arrears of tribute; the governor of Bihār invaded his country; and the Rājā was captured and removed to Gwalior. He was released after twelve years on agreeing to pay a yearly tribute of Rs. 6,000, and his country was considered part of the *Sūbah* of Bihār. From the fact that the ancestor of the Rājās of Rāmgarh (which included the present District of Hazāribāgh) is said to have received a grant of the estate from these Nāgbansi Rājās, it appears that the District formed part of their dominions. The inroads of the Muhammadans were, however, directed not against the frontier chiefdom of Rāmgarh but against Kokrah, or Chotā Nāgpur proper, to which they were attracted by the diamonds found in its rivers; and though the Rājās were reduced to the condition of tributaries by the Mughal viceroys of Bengal, they were little interfered with so long as their contributions were paid regularly. Even so late as the reign of Aurangzeb the allegiance of the chiefs of this tract must have been very loose, as the Jhārkand route to Bengal is said to have been little used by troops on account of the savage manners of the mountaineers. About this time the first Rājā of Kundā, who was a personal servant of the emperor, received a rent-free grant of the *pargana* on condition that he guarded four passes from the inroads of Marāthās, Bārgis, and Pindāris; and in 1765 Chotā Nāgpur was ceded to the British as part of Bihār. The British first came into contact with this tract in 1771, when they intervened in a dispute between one Mukund Singh, the Rājā of Rāmgarh, and his relative Tej Singh, who was at the head of the local army. The latter, who had claims to the estate, went in 1771 to Patna and laid his case before Captain Camac, who undertook to assist him and deputed for the purpose a European force under Lieutenant Goddard. Mukund Singh fled after a mere show of resistance, and the Rāmgarh estate was made over to Tej Singh subject to a tribute of Rs. 40,000 a year. Lieutenant Goddard's expedition did not extend to the Kharakdhī *pargana* in the north-west of the District. Six years earlier (1765) Mad Nārāyan Deo, the old Hindu Rājā of Kharakdhī, chief of the *ghātwāls* or guardians of the passes, had been driven from his estate by the Musalmān *āmil* or revenue agent, Kāmdār Khān, who was succeeded by Ikbāl Alī Khān. The latter was expelled in 1774 for tyranny and mismanagement by a British force under Captain James Brown. The exiled Rājā of Kharakdhī, who had exerted his influence

on the British side, was rewarded with a grant of the maintenance lands of the Rāj. Possibly he might have been completely reinstated in his former position; but in the confusion of Muhammadan misrule the *ghāt-wāls* had grown too strong to return to their old allegiance, and demanded and obtained separate settlements for the lands under their control. In the *sanads* granted to them by Captain Brown they are recognized as petty feudal chiefs, holding their lands subject to responsibility for crime committed on their estates. They were bound to produce criminals, and to refund stolen property; they were liable to removal for misconduct, and they undertook to maintain a body of police, and to keep the roads in repair.

In 1780 Rāmgarh and Kharakdīh formed part of a British District named RĀMGARH, administered by a Civilian, who held the offices of Judge, Magistrate, and Collector; while a contingent of Native infantry, known as the Rāmgarh battalion, was stationed at Hazāribāgh, under the command of a European officer. This District was dismembered after the Kol insurrection of 1831-2, when under Regulation XIII of 1833 parts of it were transferred to the surrounding Districts, and the remainder, including the *parganas* of Kharakdīh, Kendī, and Kundā, with the large estate of Rāmgarh, consisting of 16 *parganas*, which compose the area of the present District, were formed into a District under the name of Hazāribāgh. In 1854 the title of the officer in charge of the District was changed from Principal Assistant to the Governor-General's Agent to Deputy-Commissioner.

Archaeology.

The most important archaeological remains are the Jain temples at Parasnāth. Buddhist and Jain remains exist on KULŪHA HILL in the Dantāra *pargana*; and a temple and tank to the west of the hill dedicated to Kuleswarī, the goddess of the hill, are visited by Hindu pilgrims in considerable numbers. The only other remains worthy of mention are four rock temples on MĀHUDI HILL, one of which bears the date 1740 Samvat, ruins of temples at Sāt-gāwan, and an old fort which occupies a strong defensive position at KUNDĀ.

The people.

At the Census of 1872 the population recorded in the present District area was 771,875. The enumeration was, however, defective; and the Census of 1881 showed a population of 1,104,742, which rose to 1,164,321 in 1891 and 1,177,961 in 1901. The smallness of the increase during the last decade is attributable to the growing volume of emigration to Assam and elsewhere, and also to the heavy death-rate following the famine of 1897, chiefly from fever and cholera,

which are always the most prevalent causes of mortality in the District.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles	Number of		Population	Population per square mile.	Percentage of variation in population between 1801 and 1901.	Number of persons able to read and write
		Towns.	Villages				
Hazāribāgh .	5,019	2	5,440	760,164	151	— 0.3	19,680
Gīrīdīh .	2,002	1	3,408	417,797	209	+ 4.0	11,148
District total	7,021	3	8,848	1,177,961	168	+ 1.2	30,828

The three towns are HAZĀRIBĀGH, the head-quarters, CHATRĀ, and GĪRĪDĪH. The population is greatest in the west, in the valley of the Barākar river, where there is a fair extent of level country and the coal-mines support a considerable number of labourers. The country west and south-west of the central plateau consists mainly of hill and ravine, and has very few inhabitants. The population declined during the decade ending 1901 in the centre of the District, where recruiting for tea gardens was most active ; but in the Gīrīdīh subdivision there was a general increase, the growth being most marked in Gīrīdīh itself, where the coal-mines of the East Indian Railway attract a steadily increasing number of labourers. The hardy aboriginal tribes are remarkable for their fecundity and the climate is healthy ; but the soil is barren, and the natural increase in population is thus to a great extent discounted by emigration. It was hence that the Santāls sallied forth about seventy years ago to people the Dāman-i-koh in the Santāl Parganas. This movement in its original magnitude has long since died out, and the main stream of present emigration is to more distant places, Assam alone containing nearly 69,000 natives of this District. The Magahī dialect of Bihārī is spoken by the majority of the population, but Santālī is the vernacular of 78,000 persons. Hindus number 954,105, or 81 per cent. of the total, and Muhammadans 119,656, or 10 per cent.

The most numerous Hindu castes are Ahīrs or Goālās (138,000) and Bhuiyās (99,000) ; many of the Bihār castes are also well represented, especially Kurmīs (76,000), Telis (49,000), Koiris (47,000), and Chamārs (44,000), while among other castes Ghātawāls (40,000), Bhogtās (35,000), and Turis (23,000) are more common than elsewhere, and Sokiārs

Castes and
occupations.

(12,000) are peculiar to the District. Most of the Animists are Santāls (78,000), and the majority of the Musalmāns are Jolāhās (82,000). Agriculture supports 80·7 per cent. of the population, industries 9·1 per cent., commerce 0·2 per cent., and the professions 0·8 per cent.

Christian
missions.

Of 1,163 Christians in 1901 about three-fourths were natives. Mission work was begun in 1853 by the German Evangelical Lutheran Mission, but was interrupted by the Mutiny. In 1862 another mission was founded by the same society at Singhāni near Hazāribāgh; but in 1868 an unfortunate split took place, and several of the missionaries went over to the English Society for the Propagation of the Gospel. The work carried on by the German mission is chiefly educational. The Free Church of Scotland opened a branch of its Santāl Mission at Pachambā near Gīrīdīh in 1871, and maintains a dispensary and schools; its evangelistic work is chiefly among the Santāls. The Dublin University Mission, established at Hazāribāgh in 1892, maintains a boys' high school, an upper primary school, and a First Arts college, in addition to dispensaries at Hazāribāgh, Ichak, and Petārbār; but it has not been very successful in making conversions.

General
agricul-
tural con-
ditions.

The most fertile land lies in the valleys of the Dāmodar and the Sakri, the agricultural products of the latter resembling those of the adjoining Districts of Bihār rather than those of the neighbouring parts of Chotā Nāgpur. In Kharakdīh the hollows that lie between the undulations of the surface are full of rich alluvial soil, and present great facilities for irrigation; but the crests of the ridges are, as a rule, very poor, being made up of sterile gravel lying on a hard subsoil. In Rāmgarh the subsoil is light and open, and the surface is composed of a good ferruginous loam, while many of the low hills are coated with a rich dark vegetable mould. The beds of streams are frequently banked up and made into one long narrow rice-field. For other crops than rice the soil receives practically no preparation beyond ploughing. Failures of the crops are due to bad distribution of the rainfall, never to its complete failure; the soil does not retain water for long, and a break of ten days without rain is sufficient to injure the rice crop.

Chief agri-
cultural
statistics
and princi-
pal crops.

The agricultural statistics for 1903-4 are shown in the table on the next page, in square miles.

Rice is the most important crop. *Gorā* or early rice is sown broadcast after the first fall of rain in June, and is reaped about the end of August. *Aghani* or winter rice is sown in June, and reaped in November or December; it is either

sown broadcast or transplanted. After rice by far the most important crops are maize and *maruā*. Other food-grains are *gondli*, *urd*, *barai*, *rahar*, *kurthā*, gram, wheat, barley, and *khesāri*; of other food-crops the most important are sugar-cane, *mahuā*, and various vegetables. Oilseeds are extensively grown, consisting chiefly of *sarguja*, *til*, rape-seed, and linseed, while among other products may be mentioned poppy, cotton, and *renu*, a jungle root used for the manufacture of *pachwai*. A little tea is still grown, but the industry is rapidly dying out; in 1903-4 there was only one tea garden, which had an output of 3,700 lb.

Subdivision.	Total.	Cultivated	Cultivable waste.	Forests.
Hazāribāgh . .	5,019	1,616	1,266	64
Gīridih . . .	2,002	878	505	25
Total	7,021	2,494	1,771	89

The area under cultivation is gradually being extended by terracing the slopes and embanking the hollows, and by bringing under the plough the tops of ridges. The people have no idea of adopting improved agricultural methods, though they are willing to make use of seed given to them, and cultivators near Hazāribāgh and Gīridih are beginning to grow English vegetables, such as cauliflowers and tomatoes. Loans amounting to Rs. 51,000 were granted during the famine of 1897, and Rs. 29,000 was advanced in 1900-1 under the Agriculturists' Loans Act in consequence of a failure of the crops. Little advantage has been taken of the Land Improvement Loans Act.

The breed of cattle is poor. The cattle are ordinarily grazed in the jungles; land is set apart for pasture in villages in which there is no jungle, but the grass is poor, and the cattle get no proper fodder except just after harvest.

The average area irrigated is estimated at 393 square miles. Irrigation is carried on by means of *bāndhs* and *āhars*, as described in the article on GAYĀ DISTRICT. Well-water is used only for poppy.

Hazāribāgh contains 56 square miles of 'reserved,' and 33 square miles of 'protected' forest. The Kodarmā Reserve, which is the most important forest tract, covers 46 square miles on the scarp of the lower plateau, the elevation varying from about 1,200 feet near Kodarmā to about 500 feet on the Gayā boundary. The predominant tree is *sāl* (*Shorea robusta*),

but there are few trees of any size, most of the larger ones having been cut out before the forest was constituted a Reserve in 1880. Bamboos are scattered throughout the Reserve; and the other principal trees are species of *Terminalia*, *Bauhinia*, and *Ficus*, *Bassia latifolia*, *Sterculia urens*, *Cassia Fistula*, *Mangifera indica*, *Semecarpus Anacardium*, *Butea frondosa*, *Lagerstroemia parviflora*, *Woodfordia floribunda*, *Eugenia Jambolana*, and *Phoenix acaulis*. The minor products are thatching-grass, sabai grass (*Ischaemum angustifolium*), mahuā flowers (*Bassia latifolia*), and myrabolams; but none of these is at present of any great importance on account of the distance of the forest from the railway. Owing to excessive grazing and cutting, the 'protected' forests contain no timber of any size. In 1903-4 the total forest revenue was Rs. 14,500, of which Rs. 10,000 was derived from the rent for mica mines.

Mines and
minerals.

From the veins of pegmatite in the gneiss is obtained the mica which has made Hazāribāgh famous. The pegmatites have the composition of ordinary granite, but the crystals have been developed on such a gigantic scale that the different minerals are easily separable. Besides the mica, quartz, and felspar, which form the bulk of the pegmatite, other minerals of interest, and sometimes of value, are found. Beryl, for instance, is found in large crystals several inches thick; schorl occurs in nearly all the veins; also cassiterite (tin-stone), blue and green tourmaline. Lepidolite and fluorspar occur near Manimundar (24° 37' N., 85° 52' E.); columbite, which includes the rare earths tantalum and niobium, exists in one or two places; and apatite, a phosphate of lime, is found in the Lakamandwa mica mine near Kodarmā. Mica in the form of muscovite is the only mineral which has been extracted for commercial purposes. It is worked along a belt which runs from the corner of Gayā District across the northern part of Hazāribāgh into Monghyr. Along this belt about 250 mines have been opened. With the exception of Bendi, which is being tested by means of systematic driving and sinking, these are all worked by native methods. The 'books' of mica are of various sizes up to 24 by 18 by 10 inches, the more common being about 8 by 4 by 3 inches. The usual practice is to prospect the surface in the rains for these 'books' or indications of them, and then work the shoots or patches during the dry season. The pumping and winding are done by hand. The total output from 238 mines worked in Hazāribāgh in 1903 was 553 tons, valued at 9½ lakhs. The

average number of persons employed daily was 5,878, the average daily wages being for a man $2\frac{1}{2}$ to $4\frac{1}{2}$ annas, for a woman 2 annas, and for a child 1 to $1\frac{1}{2}$ annas.

The deposit of cassiterite takes a bedded form conformable to the foliation planes of the gneisses and schists in the neighbourhood of Narangā ($24^{\circ} 10' N.$, $86^{\circ} 7' E.$) in the Pālganj estate, 10 miles west of the Girīdih coal-field. Unsuccessful attempts were made to work this deposit by a company which ceased operations in 1893, after having carried down an inclined shaft for over 600 feet along the bed of ore. Cassiterite has also occasionally been obtained in mistake for iron ore in washing river sands, and the native iron-smelters have thus obtained tin with iron in their smelting operations. Lead, in the form of a dark red carbonate, has been found at Barhamasia ($24^{\circ} 20' N.$, $86^{\circ} 18' E.$) in the north of the District. Similar material has been found in the soil at Mehandādh ($24^{\circ} 22' N.$, $86^{\circ} 20' E.$), Khesmi ($24^{\circ} 25' N.$, $84^{\circ} 46' E.$), and Nawāda ($24^{\circ} 25' N.$, $84^{\circ} 45' E.$). Argentiferous galena, associated with copper ores and zinc blende, occurs on the Patro river, a mile north-north-east of Gulgo. An unsuccessful attempt was made in 1880 to work these ores. The sulphide of lead, galena, has also been obtained in connexion with the copper-ore deposits of Bāraganda. A deposit, which has been known since the days of Warren Hastings and has been the subject of many subsequent investigations, occurs near Hisātu ($23^{\circ} 59' N.$, $85^{\circ} 3' E.$); an analysis of the ore made by Piddington showed the presence of antimony with the lead. The most noteworthy example of copper ores occurs at Bāraganda in the Pālganj estate, 24 miles south-west of Girīdih. In this area the lead and zinc ores are mixed with copper pyrites, forming a thick lode of low-grade ore which is interbedded with the vertical schists. Shafts reaching a depth of 330 feet were put down to work this lode by a company which commenced operations in 1882, but apparently through faulty management the undertaking was not successful and closed for want of funds in 1891.

Lohārs and Kols formerly smelted iron in this District, but, owing to forest restrictions and the competition of imported English iron and steel, the industry has practically died out. The ore used was principally magnetite derived from the crystalline rocks. Hematite, however, is also obtained from the Barākar stage of the Gondwāna rocks of the Karanpurā field, and clay ironstone occurs in a higher stage of the Dāmodar series in the same area.

The most conspicuously successful among the attempts to develop the mineral resources is in a little coal-field near Gīrīdīh. The small patch of Gondwāna rocks, which comprises the coal in this field, covers an area of only 11 square miles, including $3\frac{1}{2}$ square miles of the Tālcher series, developed in typical form with boulder-beds and needle-shales, underlying sandstones whose age corresponds with the Barākar stage of the Dāmodar series. The most valuable seam is the Karharbāri lower seam, which is seldom less than 12 feet in thickness and is uniform in quality, producing the best steam coal raised in India, more than two-thirds of it consisting of fixed carbon. This seam persists over an area of 7 square miles, and has been estimated to contain 113,000,000 tons of coal. The Karharbāri upper seam is also a good coal, though thinner; and above it lie other seams, of which the Bhaddoah main seam was at one time extensively worked. The total coal resources of this field are probably not less than 124,000,000 tons, of which over 15,000,000 have been raised or destroyed. Like practically all the coal-fields of Bengal, the Gondwāna rocks of Gīrīdīh are pierced by two classes of trap dikes: thick dikes of basaltic rock, which are probably fissures filled at the time at which the Rājmahāl lava-flows were poured out in Upper Gondwāna times; and thin dikes and sheets of a peculiar form of peridotite, remarkable for containing a high percentage of apatite, a phosphate of lime. This rock has done an amount of damage among the coals which cannot easily be estimated, as besides cutting across the coal seams in narrow dikes and coking about its own thickness of coal in both directions, it spreads out occasionally as sheets and ruins the whole or a large section of the seam over considerable areas.

In this field 9 mines employed in 1903 a daily average of 10,691 hands and had an output of 767,000 tons. The East Indian Railway Company, by whom the bulk of the coal in this field is raised, work it for their own consumption, and have invested 15 lakhs in their mines.

The miners are of various castes; but Santāls and the lower castes of Hindus, such as Bhuiyās, Mahlis, Ghātwāls, Chamārs, Dosādhs, and Rajwārs, predominate. The daily wages paid in the mines worked by the East Indian Railway Company are: for coal-cutters, 6 to 8 annas; horse-drivers underground, 4 annas; women (underground), 3 to 4 annas; fitters, 8 annas to Rs. 1-8; and for coolies working above ground, men, $2\frac{1}{2}$ annas to 4 annas; women, $1\frac{1}{2}$ to 2 annas; and children,

1¼ to 1½ annas. One shaft, the deepest in India, has a depth of 640 feet, and nearly all the coal is wound by modern plant.

THIS is the only field in the District which is regularly worked, but other patches of Gondwāna rocks are also coal-bearing. A patch near the village of Itkhorī, 25 miles north-west of Hazāribāgh, includes about half a square mile of the Barākar stage lying on a considerable area of Tālchers. There are three seams, containing possibly about 2,000,000 tons of inferior coal. The Bokāro and Karanpurā fields lie in the low ground of the Dāmodar river, at the foot of the southern scarp of the Hazāribāgh plateau. The Bokāro field commences 2 miles west of the Jherriā field, and is likely to become important with farther railway extensions. It covers 220 square miles and includes coal seams of large size, one of 88 feet thick being measured. The coal resources of this field are estimated to aggregate 1,500,000,000 tons. In the Karanpurā area a smaller tract of 72 square miles has been separated from the northern field of 472 square miles through the exposure of the underlying crystalline rocks. There is a large quantity of fuel available in these two fields; in the smaller there must be at least 75,000,000 tons and in the northern 8,750,000,000. In the Rāmgārḥ coal-field to the south of the Bokāro field the rocks are so much faulted that it may not be profitable to mine the coal¹.

Cotton-weaving is carried on by the Jolāhās, but only the coarsest cloth is turned out. A few cheap wooden toys are made by Kharādis, and blankets by Gareris, while agricultural implements and cooking utensils are manufactured from locally smelted iron ore.

Arts and
manufac-
tures.

The chief imports are food-grains, salt, kerosene oil, cotton twist and European cotton piece-goods; and the chief exports are coal and coke. Of the food-grains, which form the bulk of the imports, rice comes chiefly from Mānbhūm, Burdwān, and the Santāl Parganas, wheat from the Punjab and the

Commerce.

¹ 'The Girīdīh Coal-field,' by Saise, in *Records, Geological Survey of India*, vol. xxvii, part iii (1894); 'The Bokāro Coal-field and the Rāmgārḥ Coal-field,' by Hughes, in *Memoirs, Geological Survey of India*, vol. vi, part ii (1867); 'The Karanpurā Coal-fields,' *Memoirs, Geological Survey of India*, vol. vii, part iii (1869); 'The Itkhorī Coal-field,' *Memoirs, Geological Survey of India*, vol. vii, part ii (1872), by Ball; 'The Chope Coal-field,' *Memoirs, Geological Survey of India*, vol. viii, part ii (1872). As regards copper and tin, see 'Geological Notes on N. Hazāribāgh,' by Mallet, in *Records, Geological Survey of India*, vol. vii, part i (1874), and 'The Copper and Tin Deposits of Chotā Nāgpur,' by Oates, in *Transactions, Federal Institute of Mining Engineers*, vol. ix (1895), p. 427.

United Provinces, and gram from Monghyr and Patna ; the other imports come from Calcutta. The coal and coke exported by rail in 1903-4 amounted to 495,000 tons, of which 86,000 tons went to Calcutta, 195,000 tons to other parts of Bengal, 114,000 tons to the United Provinces, and the remainder to the Punjab, Central Provinces, Rājputāna, and Central India. Minor exports are mica, catechu, *sabai* grass, lac, *mahuā*, and hides. Hazāribāgh, Gīridih, and Chatrā are the principal marts, and form the centres from which imported goods are distributed by petty traders. The bulk of the traffic is carried by the East Indian Railway, which taps the District at Gīridih, but a large amount of goods is carried on pack-bullocks and in bullock-carts.

Railways
and roads.

The only railways at present open are the short branch line connecting Gīridih with the East Indian main line at Madhupur, and the Gayā-Katrasgarh line recently constructed, which runs through the north-east of the District. The District board in 1903-4 maintained 44 miles of metalled and 521 miles of unmetalled roads, besides 336 miles of village tracks. The most important roads, however, are those maintained by the Public Works department, amounting to 201 miles in length (188 miles metalled and 13 miles unmetalled), and including the grand trunk road, which runs for 78 miles through the District, the road from Hazāribāgh to Rānchī, of which 30 miles lie in the District, and the roads from Hazāribāgh to Barhī and Bagodar and from Gīridih to Dumri, the aggregate length of which is 82 miles.

Famine.

Hazāribāgh was affected by the famine of 1874. Since then the only severe famine was that of 1897, when distress was general over a broad belt running north and south through the District, the *thānas* most affected being Barhī, Kodarmā, Bagodar, Gumia, Rāmgarh, Māndu, and Hazāribāgh. Relief works were opened but were not largely attended, owing partly to the unwillingness of the wilder tribes to engage in unaccustomed forms of labour, and partly to a fear that the acceptance of famine rates of payment would tend to lower wages permanently ; a good deal of employment, however, was afforded by the District board, and gratuitous relief was given to beggars and destitute travellers. The daily average number of persons employed on relief works was highest (1,728) in May, while the number in receipt of gratuitous relief reached its maximum (6,836) in June. The expenditure amounted to Rs. 73,000, including Rs. 26,000 spent on gratuitous relief, and loans were granted to the extent of Rs. 51,000.

For administrative purposes the District is divided into two subdivisions, with head-quarters at HAZĀRIBĀGH and GĪRĪDH. The staff at Hazāribāgh subordinate to the Deputy-Commissioner consists of three Deputy-Magistrate-Collectors, while the subdivisional officer of Gīrīdh is assisted by a Sub-Deputy-Collector.

District subdivisions and staff.

The chief civil court is that of the Judicial Commissioner of Chotā Nāgpur. The Deputy-Commissioner exercises the powers of a Subordinate Judge, and a Subordinate Judge comes periodically from Rānchī to assist in the disposal of cases. Minor original suits are heard by three Munsifs, sitting at Hazāribāgh, Chatrā, and Gīrīdh. Rent suits under the Chotā Nāgpur Tenancy Act are tried by a Deputy-Magistrate-Collector at Hazāribāgh, by the Munsifs who are invested with the powers of a Deputy-Collector for this purpose, and by the subdivisional officer of Gīrīdh; appeals from their decisions are heard by the Deputy-Commissioner or the Judicial Commissioner of Chotā Nāgpur. Criminal cases are tried by the Deputy-Commissioner, the subdivisional officer of Gīrīdh, the above-mentioned Deputy and Sub-Deputy Magistrates, and the Munsif of Chatrā, who has been specially invested with second-class powers. The Deputy-Commissioner possesses special powers under section 34 of the Criminal Procedure Code, and the Judicial Commissioner of Chotā Nāgpur disposes of appeals from magistrates of the first class and holds sessions at Hazāribāgh for the trial of cases committed to his court. Hazāribāgh is the least criminal District in Chotā Nāgpur, and crime is comparatively light.

Civil and criminal justice.

In 1835, the first year for which statistics are available, 86 separate estates paid a land revenue of Rs. 49,000. The number of estates increased to 244 in 1870-1, but after that date a number of the smaller estates were amalgamated with others and the total fell in 1903-4 to 157, with a demand of 1.33 lakhs. Of these estates, 72 are permanently settled, 82 are temporarily settled, and 3 are held direct by Government.

Land revenue.

In Hazāribāgh District the eldest son takes the entire estate, and provides for the other members of the family by assigning them smaller holdings as maintenance grants. There is thus no tendency to the excessive subdivision of estates which is found in Bihār. Besides these maintenance grants, *jāgirs* to *ghātwāls*, priests, servants, and others are common. The only unusual form of *jāgīr* is one known as *putra-putrādīk*, which remains in the family of the grantee until the death of the last direct male heir, after which it reverts to the parent estate.

The incidence of revenue is very low, being R. 0-1-4 per cultivated acre, or only 8 per cent. of the rental, which is Rs. 1-2-6 per cultivated acre. The highest rates are realized from rice lands, which are divided into three main classes *gairā*, the rich alluvial lands between the ridges; *singā*, the land higher up the slopes; and *bād*, the highest land on which rice can be grown. The rates, which are lowest in the central plateau and highest in the Sakri valley, vary for *gairā* land from Rs. 3-10-8 to Rs. 5-5-4 per acre (average Rs. 4-5-4); for *singā* land, from Rs. 2-10-8 to Rs. 4 (average Rs. 3-10-8); and for *bād* land, from Rs. 1-10-8 to Rs. 3-10-8 (average, Rs. 2-2-8). Other lands are classified as *bāri* or *gharbāri*, the well-manured land situated close to the village; *bāhirbāri*, fairly good land situated farther from the homestead; *chirā*, land set apart for growing paddy seedlings; *tānr*, barren land on the tops of the ridges; and *tarri* or rich land on the banks or in the beds of rivers. For these the ryot usually renders predial services in lieu of rent.

Village lands are of four kinds. *Manjhihas* is a portion of the best land set apart for the head of the village. It is frequently sublet, sometimes at a cash rent, but more often on the *adhbatai* system, under which each party takes half the produce. When held *khās*, it is cultivated by the ryots for the proprietor, the latter supplying the seed and a light meal on the days when the villagers are working for him. **Jiban* is land in which the ryots have occupancy rights. *Khundwāt* or *sājwāt* lands are those reclaimed from jungle or waste land, and the ryot and his descendants have a right of occupancy, paying rent at half the rate prevailing in the neighbourhood for *jiban* lands. *Utkar* land is that cultivated by tenants-at-will. The rents of *jiban* and *utkar* lands are usually payable in cash, but in the Sakri valley the system of payment by assessment or division of the produce is common.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	1,16	1,25	1,31	1,34
Total revenue . . .	3,94	4,92	5,42	6,74

Local and
municipal
govern-
ment.

Outside the municipalities of HAZĀRIBĀGH, CHATRĀ, and GĪRĪDĪH, local affairs are managed by the District board. In 1903-4 its income was Rs. 96,000, including Rs. 50,000

derived from rates; and the expenditure was Rs. 1,01,000, the chief item being Rs. 59,000 spent on public works.

The District contains 18 police stations or *thānas*, and 20 Police and outposts. In 1903 the force subordinate to the District Superintendent consisted of 3 inspectors, 33 sub-inspectors, 54 head constables, and 431 constables. The Central jail at Hazāribāgh has accommodation for 1,257 prisoners, and a subsidiary jail at Gīrīdih for 21. The Hazāribāgh Reformatory school has accommodation for 357 boys.

Education is very backward, and only 2.6 per cent. of the population (5.2 males and 0.2 females) could read and write in 1901. The number of pupils under instruction increased from 6,234 in 1882-3 to 15,867 in 1892-3, but fell to 14,345 in 1900-1. In 1903-4, 16,440 boys and 2,014 girls were at school, being respectively 19.2 and 2.2 per cent. of the children of school-going age. The various missions maintain schools for the benefit of the aboriginal tribes. The most notable educational institutions are the Dublin University Mission First Arts college, and the Reformatory at Hazāribāgh. The total number of institutions, public and private, in 1903-4 was 692: namely, the Arts college, 16 secondary, 643 primary, and 32 special schools. The expenditure on education was Rs. 1,12,000, of which Rs. 38,000 was met from Provincial funds, Rs. 31,000 from District funds, Rs. 800 from municipal funds, and Rs. 23,000 from fees.

In 1903 the District contained 7 dispensaries, of which 5 had accommodation for 64 in-patients. The cases of 37,411 out-patients and 586 in-patients were treated during the year, and 1,570 operations were performed. The expenditure was Rs. 11,000, of which Rs. 1,200 was met from Government contributions, Rs. 2,000 from Local and Rs. 2,400 from municipal funds, and Rs. 5,000 from subscriptions.

Vaccination is compulsory only in the Hazāribāgh, Gīrīdih, and Chatrā municipalities. In 1903-4 the number of persons successfully vaccinated was 41,000, or 36 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi (1877); F. B. Bradley-Birt, *Chotā Nāgpur* (1903).]

Hazāribāgh Subdivision.—Head-quarters subdivision of Hazāribāgh District, Bengal, lying between 23° 25' and 24° 38' N. and 84° 27' and 86° 7' E., with an area of 5,019 square miles. The subdivision consists of three distinct tracts: a high central plateau, a lower plateau extending along the northern boundary, and the valley of the Dāmodar to the

south. The population in 1901 was 760,164, compared with 762,510 in 1891, the density being 151 persons per square mile. There are two towns, HAZĀRIBĀGH (population, 15,799), the head-quarters, and CHATRĀ (10,599); and 5,440 villages. The subdivision contains some interesting archaeological remains, consisting of rock temples at MĀHUDI, Buddhist inscriptions at KULUHĀ Hill, and an old fort at KUNDĀ.

Gīrīdh Subdivision.—Eastern subdivision of Hazāribāgh District, Bengal, lying between $23^{\circ} 44'$ and $24^{\circ} 49'$ N. and $85^{\circ} 39'$ and $86^{\circ} 34'$ E., with an area of 2,002 square miles. The northern portion of the subdivision consists of hilly country and undulating uplands, which merge in the valley of the Barākar on the south and of the Sakri river on the north. To the south there is a second hilly tract, in which PARASNĀTH Hill is situated, and along the southern boundary is the valley of the Dāmodar. The population in 1901 was 417,797, compared with 401,811 in 1891, the density being 209 persons per square mile. It contains one town, GĪRĪDH (population, 9,433), the head-quarters; and 3,408 villages. Important coal-fields belonging to the East Indian Railway are situated in the neighbourhood of Gīrīdh town. Parasnāth Hill is a well-known place of pilgrimage for the Jains.

Chatrā.—Town in the head-quarters subdivision of Hazāribāgh District, Bengal, and one of the principal trade centres of the District, situated in $24^{\circ} 12'$ N. and $84^{\circ} 53'$ E., about 36 miles north-west of Hazāribāgh town. Population (1901), 10,599. On October 2, 1857, an engagement took place at Chatrā between H.M.'s 53rd Foot, supported by a detachment of Rattray's Sikhs, and the Rāmgarh Battalion, which had mutinied at Rānchī, and was marching to join the rebel *samān-dār* Kuar Singh at Bhojpur in Shāhābād. The mutineers, posted in great force on the brow of a hill, made a stubborn resistance, but were defeated with a loss of 40 men and all their supplies. Chatrā was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 6,000, and the expenditure Rs. 5,000. In 1903-4 the income was Rs. 6,000, mainly from a tax on persons (or property tax); and the expenditure was Rs. 5,004.

Gīrīdh Town.—Head-quarters of the subdivision of the same name in Hazāribāgh District, Bengal, situated in $24^{\circ} 10'$ N. and $86^{\circ} 22'$ E. Population (1901), 9,433. Gīrīdh is connected by a branch with the main line of the East Indian Railway at Madhupur, and is the centre of the Karharbāri coal-field (*see* HAZĀRIBĀGH DISTRICT). Gīrīdh was constituted

a municipality in 1902. The average income since its constitution has been Rs. 3,000, and the expenditure Rs. 2,900. In 1903-4 the income was Rs. 5,600, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 5,200. The town contains the usual subdivisional offices, and a sub-jail with accommodation for 21 prisoners.

Hazāribāgh Town.—Head-quarters of Hazāribāgh District, Bengal, picturesquely situated, in $23^{\circ} 59' N.$ and $85^{\circ} 22' E.$, on the high central plateau of the District, at an elevation of 2,000 feet above sea-level, in the midst of a group of conical hills. Population (1901), 15,799. The town is little more than a cluster of hamlets, with intervening cultivation, which sprang up round the former military bazar. Hazāribāgh has been the head-quarters of the civil administration since 1834. The cantonment lies south-east of the town. The last military force stationed here was the second battalion, 22nd Regiment; but owing to an outbreak of enteric fever in 1874, which resulted in numerous deaths, the troops were withdrawn, with the exception of a small detachment, which was chiefly designed to guard against a possible outbreak of the prisoners in the European penitentiary situated here. Subsequently, on the abolition of the penitentiary, the European troops were entirely withdrawn. Hazāribāgh was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 11,600, and the expenditure Rs. 10,800. In 1903-4 the income was Rs. 17,000, of which Rs. 5,000 was derived from a tax on persons (or property tax), and Rs. 4,000 from a conservancy rate; and the expenditure was Rs. 16,000. The town contains the usual public buildings. The Central jail has accommodation for 1,257 prisoners; the principal articles manufactured are blankets and cloth. The Hazāribāgh Reformatory school has since 1882 occupied the buildings formerly used for the European penitentiary. It is managed by a board subject to the general control of the Director of Public Instruction, and has cubicle accommodation for 357 boys, who are taught weaving, agriculture, tailoring, gardening, carpentry, shoe-making, and blacksmiths' work. The chief educational institution is the Dublin University Mission First Arts college, which was opened in 1899.

Kuluhā.—Hill in the head-quarters subdivision of Hazāribāgh District, Bengal, lying between $24^{\circ} 16'$ and $24^{\circ} 27' N.$ and $84^{\circ} 48'$ and $85^{\circ} 6' E.$ It abounds with Buddhist relics, and has a temple dedicated to Buddha and impressions said to have been made by Buddha's feet. The inscriptions, which

date between the eighth and twelfth centuries, appear to be almost exclusively Buddhist, but are in very bad preservation. The Brāhmins have appropriated the sacred place of the Buddhists, and on the top of the hill is a temple of Durgā called Kuleswarī. Two fairs are held annually on the hill in the months of Chait and Aswin.

Kunda.—Ruined fort in the head-quarters subdivision of Hazāribāgh District, Bengal, situated in $24^{\circ} 13' N.$ and $84^{\circ} 39' E.$ It is in the form of a parallelogram, about 280 feet long by 170 feet broad, with a square central entrance tower on the west front, and four square corner towers connected by straight battlemented walls with an average height of 30 feet. It was admirably suited for defence, being situated on a tongue of land projecting into a basin surrounded by hills, except on the east side, where it commands a gorge.

Lugu.—Detached hill south of the central plateau of Hazāribāgh District, Bengal, situated in $23^{\circ} 47' N.$ and $85^{\circ} 42' E.$, in the head-quarters subdivision. The northern face has a bold scarp 2,200 feet in height; and the highest point is 3,203 feet above the sea.

Mahābar.—Range of hills in the head-quarters subdivision of Hazāribāgh District, Bengal, extending between $24^{\circ} 10'$ and $24^{\circ} 14' N.$ and $85^{\circ} 24'$ and $85^{\circ} 35' E.$, in a general direction east and west for 14 miles. Their sides are steep, but not entirely scarped; the top undulates and has an average breadth of about a mile. The general elevation above the Sakri valley is 1,600 feet, and the elevation above sea-level at the eastern end 2,210 feet. A waterfall, Kokalkāt, 90 feet in height, leaps down from the northern face of the range in Gayā District.

Māhudi.—Hill in the head-quarters subdivision of Hazāribāgh District, Bengal, situated in $24^{\circ} 12' N.$ and $85^{\circ} 12' E.$, about 8 miles from the southern face of the Hazāribāgh plateau. The hill is 2,437 feet above the sea, falling steeply on every side for 800 feet. Four rock-cut temples are situated on the summit.

Pachambā.—Village in the Gīridih subdivision of Hazāribāgh District, Bengal, situated in $24^{\circ} 13' N.$ and $86^{\circ} 16' E.$, $3\frac{1}{2}$ miles from Gīridih railway station. Population (1901), 3,510. Pachambā is the head-quarters of the Free Church of Scotland Mission to the Santāls, and contains a dispensary and schools. An annual fair is held in the month of Kārtik.

Parasnāth.—Hill and place of Jain pilgrimage in the east of the Gīridih subdivision of Hazāribāgh District, Bengal, and adjoining Mānbhūm, situated in $23^{\circ} 58' N.$ and $86^{\circ} 8' E.$

The mountain consists of a central narrow ridge, with rocky peaks, rising abruptly to 4,480 feet above sea-level from the plains on the south-west, and throwing out long spurs which extend towards the Barākar river on the north. A spur to the south-east forms the boundary between Hazāribāgh and Mānbhūm, and eventually subsides into an extended belt of high land with peaked hills in the latter District. The hill is now easily approached by the East Indian Railway to Gīridīh station, and thence by a short journey of about 18 miles along a metalled road. In 1858 Parasnāth was selected as a convalescent dépôt for European troops; but on account of the confined area of the plateau at the summit and the solitude, it was found unsuitable for the purpose and was abandoned in 1868. The building formerly used as the officers' quarters is now utilized as a *dāk*-bungalow. Pilgrims to the number of 10,000 flock annually from distant parts of India to this remote spot—the scene of Nirvāna or 'beatific annihilation' of no less than ten of the twenty-four deified saints who are the objects of Jain adoration. From the last of these, Pārsva or Pārsva-nātha, the hill, originally called Samet Sīkhar, has taken its better known name. Pilgrimage to Parasnāth is still as popular as ever among the Jains; and new shrines, a single one of which in white marble cost Rs. 80,000, are from time to time erected. The temples lie well apart from the plateau, and the improved means of communication hold out a possibility of the latter being again utilized as a small sanitarium.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi, pp. 216, 217.]

Rāmgārh.—Old District of Bengal, stretching on the north-west as far as Sherghāti in Gayā and including on the east the Chakai *pargana* of Monghyr and the *zamīndāri rāj* of Pānchet, and on the south-west and south the present District of Palāmau, while Rānchī owed a loose allegiance as a tributary estate administered by its own chief. This unwieldy District was broken up after the Kol insurrection in 1831–2, parts of it going to Gayā, Monghyr, Mānbhūm, and Lohārdagā (now Rānchī), while the rest was formed into the modern District of Hazāribāgh.

Rānchī District.—District in the Chotā Nāgpur Division of Bengal, lying between 22° 20' and 23° 43' N. and 84° 0' and 85° 54' E. It is the largest District in Bengal, having an area of 7,128 square miles. It is bounded on the north by the Districts of Palāmau and Hazāribāgh; on the east by Mānbhūm; on the south by Singhbhūm and the Tributary State of Gāng-
Boundaries, configuration, and hill and river systems.

pur; and on the west by the Jashpur and Surgujā States and Palāmau District.

Rānchī consists broadly of two plateaux, the higher of which, on its northern and western sides, has an elevation of about 2,000 feet and covers about two-thirds of its area, while the lower plateau lies on the extreme eastern and southern borders and has only half this elevation. The *ghāts* or passes which connect the two are for the most part steep and rugged, and are covered with a fair growth of timber. In the north-western corner of the District are situated several lofty ranges of hills, some of them with level tops, locally called *pāts*, a few having an area of several square miles, but sparsely inhabited and with very little cultivation. The highest point in the District is the Sāru hill, about 20 miles west of the town of Lohārdagā, which rises to 3,615 feet above sea-level. With the exception of the hills in the north-west and of a lofty range which divides the main portion of the lower plateau from the secluded valley of Sonapet in the south-eastern corner of the District, the plateaux themselves are flat and undulating, with numerous small hills. Rānchī possesses varied beauties of scenery, especially in the west and south, where bare and rugged rocks alternate with richly wooded hills enclosing secluded and peaceful valleys. Not least among the scenic features are the various waterfalls, any of which would in a Western country be regarded as worthy of a visit even from a distance. The finest is the Hundrughāgh on the Subarnarekhā river about 30 miles east of Rānchī town; but several others are hardly inferior, e.g. the Dasamghāgh near Būndu, two Peruāghāghs (one in Kochedegā and one in the Basiā *thāna*), so called because of the hundreds of wild pigeons which nest in the crevices of the rocks round about all these falls, and the beautiful though almost unknown fall of the Sankh river (known as the Sadnīghāgh from the adjacent village of Sadnī Konā), where it drops from the lofty Rājdera plateau on its way to the plains of Barwe below.

The river system is complex, and the various watersheds scatter their rivers in divergent directions. Near the village of Nagrā, 12 miles west and south-west of Rānchī town, rise the SUBARNAREKHĀ (the 'golden line or thread') and the South Koel (a very common name for rivers in Chotā Nāgpur, but apparently without any specific meaning); the former on the south side and the latter on the north. The Subarnarekhā, of which the chief affluents in this District are the Kokro, the Kānchī, and the Karkārī, flows at first in a north-easterly

direction, passes the town of Rānchī at a distance of about 2 miles, and eventually running due east flows through a narrow and picturesque valley along the Hazāribāgh border into the District of Mānbhūm. The South Koel, on the other hand, starting in a north-westerly direction, runs near Lohārdagā, and turning south again, flows across the District from north-west to south-east into Gāngpur State and there joins the Sankh, which, rising in the extreme west of the District, also runs south-east, the united stream being known as the BRĀHMANĪ. Within almost a few yards of the Sankh rises another Koel, known as the North Koel ; but this stream flows to the north and eventually, after traversing Palāmau District, joins the Son under the plateau of Rohtās. None of these rivers contains more than a few inches of water during the dry season ; but in the rains they come down in sudden and violent freshes, which for a few hours, or it may be even days, render them wellnigh impassable. Lakes are conspicuous by their absence, the explanation being that the granite which forms the chief geological feature of the District is soft and soon worn away.

The geological formations are the Archaean and the Gond-Geology. wāna. Of the latter, all that is included within the District is a small strip along the southern edge of the Karanpurā coal-fields. The rock occupying by far the greatest area is gneiss of the kind known as 'Bengal gneiss,' which is remarkable for the great variety of its component crystalline rocks. The south of the District includes a portion of the auriferous schists of Chotā Nāgpur. These form a highly altered sedimentary and volcanic series, consisting of quartzites, quartzitic sandstones, slates of various kinds, sometimes shaly, hornblendic, mica, talcose, and chloritic schists. Like the Dhārwar schists of Southern India, which they resemble, they are traversed by auriferous quartz veins. A gigantic intrusion of igneous basic diorite runs through the schists from east to west, forming a lofty range of hills which culminate in the peak of Dalmā in Mānbhūm, whence the name 'Dalmā trap' has been derived. In the neighbourhood of this intrusion the schists are more metamorphosed and contain a larger infusion of gold ¹.

The narrower valleys are often terraced for rice cultivation, Botany. and the rice-fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky ; but, where undulating, is usually clothed with a dense scrub jungle, in which

¹ The gold-bearing rocks of Chotā Nāgpur have been described by S. M. MacLaren in *Records, Geological Survey of India*, vol. xxxi, pt. ii.

Dendrocalamus strictus is prominent. The steep slopes of the *ghāts* are covered with a dense forest mixed with climbers. *Sāl* (*Shorea robusta*) is gregarious; among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adina*, which these forests share with the similar forests on the Lower Himālayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soyimida*, *Boswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain. One of the features of the upper edge of the *ghāts* is a dwarf palm, *Phoenix acaulis*. Striking too is the wealth of scarlet blossom in the hot season produced by the abundance of *Butea frondosa* and *B. superba*, and the mass of white flowers along the *ghāts* in November displayed by the convolvulaceous climber *Porana paniculata*. The jungles also contain a large variety of tree and ground orchids.

Fauna.

The Indian bison (*gaur*) is probably extinct as an inhabitant of the District, but a wanderer from Gāngpur State or Palāmau may occasionally even now be encountered near the boundary. Tigers, leopards, hyenas, bears, and an occasional wolf are to be found in all jungly and mountainous parts, while *sāmbār* (*Cervus unicolor*), *nīlgai* (*Boselaphus tragocamelus*), antelope, *chātal* or spotted deer, and the little *koṭra* or barking-deer (*Cervulus muntjac*) are common in all the larger jungles.

Tempera-
ture and
rainfall.

The temperature is moderate, except during the hot months of April, May, and June, when the westerly winds from Central India cause high temperature with low humidity. The mean temperature increases from 76° in March to 85° in April and 88° in May, the mean maximum from 88° in March to 100° in May, and the mean minimum from 63° to 76°. During these months humidity is lower in Chotā Nāgpur than in any other part of Bengal, falling in Rānchī to 43 per cent. in March. During the cold season the mean temperature is 63° and the mean minimum 51°. The annual rainfall averages 52 inches, of which 8.1 inches fall in June, 13.6 in July, 13.7 in August, and 8.8 in September.

History.

The history of Chotā Nāgpur divides itself into four well-marked periods. During the first the country was in the undisturbed possession of the Mundā and Oraon races, who may be presumed to have reclaimed it from a state of uncultivated forest; it was at that time called Jhārkand or the 'forest tract.' The second period embraces the subjection of the

aboriginal village communities to the chiefs of the Nāgbansi family. The birth at Sūtiāmba, near Pithauriā, 10 miles north of Rānchī town, of the first of this race, Phanī Mukuta Rai, the son of the Brāhman's daughter, Pārati, and the snake god, Pundarika Nāg, is a well-known incident of mythology. Whatever the real origin of the family, it is certain that at some unknown time the aborigines of Chotā Nāgpur, either by voluntary submission or by force of arms, came under the sway of the Nāgbansi Rājās, and so continued until they in turn became subject to the Musalmān rulers of Upper India. This event, which may be taken as inaugurating the third period in the history of Chotā Nāgpur, took place in the year 1585, when Akbar sent a force which subdued the Rājā of Kokrah, or Chotā Nāgpur proper, then celebrated for the diamonds found in its rivers; the name still survives as that of the most important *pargana* of Rānchī District. Musalmān rule appears for a long time to have been of a nominal description, consisting of an occasional raid by a Muhammadan force from South Bihār and the carrying off of a small tribute, usually in the shape of a few diamonds from the Sankh river. Jahāngīr sent a large force under Ibrāhīm Khān, governor of Bihār, and carried the forty-fifth Kokrah chief, Durjan Sāl, captive to Delhi and thence to Gwalior, where he was detained for twelve years. He was eventually reinstated at Kokrah with a fixed tribute; and it would appear that the relations thus formed continued on a more settled basis until the depredations of the Marāthās in the eighteenth century led, with other causes, to the cession of the Chotā Nāgpur country to the British in 1765. A settlement was arrived at with the Nāgbansi Rājā in 1772; but after a trial of administration in which he was found wanting, the country now included in Rānchī District was, along with other adjoining territories, placed under the charge of the Magistrate of RĀMGARH in Hazāribāgh District. This was in 1816 or 1817. Meanwhile the gulf between the foreign landlords and their despised aboriginal tenants had begun to make itself felt. A large proportion of the country had passed from the head family, either by way of maintenance grants (*khorphosh*) to younger branches or of service grants (*jāgīr*) to Brāhmins and others, many of whom had no sympathy with the aborigines and sought only to wring from them as much as possible. The result was a seething discontent among the Mundās and Oraons, which manifested itself in successive risings in the years 1811, 1820, and 1831. In the last year the revolt assumed very

serious proportions, and was not suppressed without some fighting and the aid of three columns of troops, including a strong body of cavalry. It had long become apparent that the control from Rāmgarh, which was situated outside the southern plateau and in reality formed part of a more northern administrative system, was ineffective; and in 1833 Chotā Nāgpur proper with Dhalbhūm was formed into a separate province, known as the South-Western Frontier Agency, and placed in the immediate charge of an Agent to the Governor-General aided by a Senior and Junior Assistant, the position of the former corresponding closely with that of the present Deputy-Commissioner of Rānchī. In 1854 the system of government was again altered, and Chotā Nāgpur was constituted a non-regulation province under a Commissioner. In the Mutiny of 1857 the head branch of the Chotā Nāgpur family held firm, though the Rāmgarh Battalion at Rānchī mutinied and several of the inferior branches of the Nāgbansis seceded. Chief among these in Rānchī District was the *samīndār* of Barkāgarh, whose property was confiscated and now forms a valuable Government estate. The subsequent history of the District has been uneventful, with the exception of periodical manifestations of discontent by the Mundā population in the south and south-east. This was fanned during the last fifteen years of the nineteenth century by the self-interested agitation of so-called *sardārs* or leaders, whose chief object has been to make a living for themselves at the expense of the people, and also by the misrepresentations of a certain section of the German missionaries. It culminated in a small rising in 1899 under one Birsā Mundā, who set himself up as a God-sent leader with miraculous powers. The movement was, however, wanting in dash and cohesion, and was suppressed without difficulty by the local authorities, the ringleader being captured, and ending his days from cholera in the Rānchī jail. When the South-Western Frontier Agency was established in 1833, the District, which was then known as Lohārdagā, included the present District of Palāmau and had its headquarters at Lohārdagā, 45 miles west of Rānchī. In 1840 the headquarters were transferred to their present site, and in 1892 the subdivision of Palāmau with the Torī *pargana* was formed into a separate District.

Archaeo-
logy.

Doisānagar, which lies about 40 miles to the south-west of Rānchī, contains the ruins of the palaces built in the last quarter of the eighteenth century by Mahārājā Rām Sahi Deo and his brother the Kuar Gokhal Nāth Sahi Deo, and also of

some half-dozen temples erected for the worship of Mahādeo and Ganesh. The stronghold of the former Rājā of Jashpur, one of the old chiefs brought into subjection by the Mughals, is situated about 2 miles north of Getalsud in the Jashpur *pargana*. The only other relic worthy of note is the temple at CHUTIĀ, on the eastern outskirts of the town of Rānchī. Chokāhātu, or 'the place of mourning,' is a village in the south-west of the District famous for its large burial-ground, which is used by both Muhammadans and Mundās.

The recorded population of the present area rose from The 813,328 in 1872 to 1,058,169 in 1881, 1,128,185 in 1891, ^{people.} and 1,187,925 in 1901. The large apparent increase in the first decade may be in part attributed to the imperfections of the first Census. The subsequent growth would have been greater but for the drain of cooly recruiting for the tea and other industries, coupled with a year of sharp scarcity just before the Census of 1901. The more jungly tracts are very malarious, but on the whole the climate compares favourably with that of other parts of Bengal. The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles	Number of		Population	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages				
Rānchī . .	3,506	3	2,016	753,236	215	+ 3.1	24,845
Gumla . .	3,622	1	1,157	434,689	120	+ 9.1	7,686
District total	7,128	4	3,173	1,187,925	167	+ 5.2	32,531

NOTE.—In 1905 a new subdivision, Khunti, with an area of 1,140 square miles, was constituted, and the area of the Rānchī subdivision was reduced to 2,366 square miles. The population of the Rānchī and Khunti subdivisions is 527,829 and 225,407 respectively.

The four towns are RĀNCHĪ the present, and LOHĀRDAGĀ the former head-quarters, BĪNDU, and PĀLCOT. The density of population declines steadily from the north-east to the west and south-west; the greatest growth has taken place along the south of the District. Emigration has for many years been very active. In 1897, 4,096 coolies were dispatched to the Assam tea gardens, in 1898, 4,329, and in 1899, 3,244; in 1900, owing to a failure of the crops, the number rose to 6,307; but since then it has fallen to 2,750 in 1901, and to 1,799 in 1902. The diminution is due in part to the very much closer supervision over the operations of recruiters provided by recent legislation. There is also a large but

unrecorded exodus to the tea gardens of Darjeeling and the Duārs, which are worked with free labour, and to the coal-mines of Mānbhūm and Burdwān. During the winter months many visit the Districts of Bengal proper to seek employment on earthwork and in harvesting the crops. The total number of emigrants at the time of the Census of 1901 was no less than 275,000, of whom 92,000 were in Assam and 80,000 in Jalpaiguri District.

Hindī is spoken by $42\frac{1}{2}$ per cent. of the population. The dialect most in vogue is a variety of Bhojpuri known as Nāg-puria, which has borrowed some of its grammatical forms from the adjoining Chhattisgarhī dialect. Languages of the Mundā family are spoken by 30 per cent. of the population, the most common being Mundārī, which is the speech of 299,000 persons, and Khariā, spoken by 50,000. Kurukh or Oraon, a Dravidian language, was returned at the Census as the parent tongue of rather more than a quarter of the population; but as a matter of fact many of the Oraons have abandoned their tribal language in favour of a debased form of Hindī.

Hindus numbered 474,540 persons (or 40 per cent. of the total); Animists, 546,415 (46 per cent.); Musalmāns, 41,972 ($3\frac{1}{2}$ per cent.); and Christians, 124,958 ($10\frac{1}{2}$ per cent.). Animism is the religion, if such it can be called, of the aboriginal tribes; but many such persons now claim to be Hindus, and the native Christians of Rānchī District have come almost entirely from their ranks.

Castes and
occupa-
tions.

Of aboriginal tribes, the most numerous are the ORAONS (279,000), MUNDĀS (236,000), and Khariās (41,000). The Oraons are found chiefly along the north and west, the Mundās in the east, and the Kariās in the south-west of the District. Among Hindu castes, the Kurmīs (49,000) and Ahīrs (Goālās) and Lohārs (each 37,000) are most largely represented; the last named probably include a large number of aboriginal blacksmiths. Agriculture supports 79 per cent. of the population, industries 11 per cent., commerce 0.6 per cent., and the professions 1.2 per cent.

Christian
missions.

Christians are more numerous than in any other Bengal District, and in fact number five-elevenths of the whole Christian population of Bengal and Eastern Bengal. Missionary effort commenced shortly before the middle of the nineteenth century, the converts consisting almost entirely of Oraons (61,000), Mundās (52,000), and Khariās (10,000). The German Evangelical Lutheran Mission was established in Rānchī in 1845, and was originally known as Gossner's

Mission. An unfortunate disagreement subsequently took place; and in 1869 it was split up into two sections, the one enrolling itself under the Society for the Propagation of the Gospel, and the other retaining the name of Gossner's Mission. The progress made during recent years has been remarkable, the number of converts having increased from 19,000 in 1891 to three times that number in 1901. The mission now possesses 10 stations in the District; and the workers include 21 European missionaries, 19 native pastors, and 515 catechists, teachers, &c. The Church of England Mission, which had its origin from the split in Gossner's Mission, had in 1901 a community of 13,000, compared with 10,000 in 1891. The Roman Catholic Mission is an offshoot from a mission founded at Singhbhūm in 1869, which was extended to Rānchī in 1874. It now has 11 stations in the District; and its converts in 1901 numbered 54,000, or about three-fifths of the total number of Roman Catholics in Bengal and Eastern Bengal. The Dublin University Mission, which commenced work at Hazāribāgh in 1892, opened a branch at Rānchī in 1901.

The greater part of the District is an undulating table-land, but towards the west and south the surface becomes more broken: the hills are steeper, and the valleys are replaced by ravines where no crops can be grown. Cultivable land ordinarily falls into two main classes: *don* or levelled and embanked lowlands, subdivided according to the amount of moisture which they naturally retain; and *tānr* or uplands, which include alike the *bāri* or homestead lands round the village sites and the stony and infertile lands on the higher ground. Generally speaking, the low embanked lands are entirely devoted to rice, while on the uplands rice is also grown, but in company with a variety of other crops.

The chief agricultural statistics for 1903-4 are shown below, in square miles:—

Subdivision	Total	Cultivated.	Cultivable waste	Forests.
Rānchī . . .	3,506	1,254	537	2
Gumla . . .	3,622	915	659	...
Total	7,128	2,169	1,196	2

NOTE.—In 1905 a new subdivision, with head-quarters at Khunti, was constituted from a portion of the Rānchī subdivision. The areas of the Rānchī and Khunti subdivisions are 2,366 and 1,140 square miles respectively.

The chief staple is rice, grown on 1,914 square miles, the upland rice being invariably sown broadcast, while the lowland rice is either sown broadcast or transplanted. Other

important cereals are the small millet, *gondli* (*Panicum miliare*), and *maruā*; pulses, especially *urd*, and oilseeds, chiefly *sarguja* and mustard, are also extensively grown. The *bhadoi* harvest, reaped in August and September, includes the upland rice crops, millets, and pulses; and the *khariṭ*, reaped in the latter part of November, December, and January, includes the whole of the rice crops on the embanked lands, *sarguja*, and one of the varieties of *urd* pulse. Though in area there is apparently not much difference between these harvests, the latter is by far the more important of the two owing to the weight of rice taken off the *don* lands. The *rabi* harvest in February is relatively very small, the only important crops being *rahar* (*Cajanus indicus*) and *sarson*. Tea was at one time somewhat extensively cultivated, but the soil and the rainfall do not appear to be suited to the production of the finer varieties, and the industry has of late years sensibly declined. In 1903 there were 21 gardens with 2,256 acres under tea and an out-turn of 306,000 lb. Market-gardening is carried on to a small extent in the neighbourhood of the large towns by immigrant Koiris from Bihār.

Improve-
ments in
agricul-
tural
practice.

The low land most suitable for embanked rice cultivation has already been taken up, and as the cost of levelling and embanking the higher ground is considerable, the extension of cultivation proceeds but slowly. The native cultivator employs primitive methods and displays no interest in the introduction of improvements. In Government estates experiments have been made with improved seeds, especially of the potato, and on the Getalsud tea estate some *tānr* land has been put under the *sisal* aloe and experiments in fibre extraction are being made. The construction of tanks for irrigation purposes by erecting dams across the slopes, though they would be cheap and effective, has been but little resorted to, except at Kalebīra and in a few villages in Government estates. Cow-dung is used for manuring lowland rice, and ashes for the fertilization of the uplands, especially for cotton. In the lean years 1897 and 1900 advances of Rs. 20,000 were made under the Land Improvement Loans Act, and of Rs. 1,43,000 under the Agriculturists' Loans Act.

Cattle, &c. No good cattle are bred. Pigs and fowls are largely kept by the aboriginal inhabitants, especially in the remoter parts and on the higher plateaux.

Forests. Extensive jungles under private ownership exist in the north-west and south, but the only Government forest is a small Reserve covering 2 square miles near Rānchī town.

The Sonapet area in the south-east corner of the District, Minerals. which is almost entirely surrounded by the Dalmā trap, has long been known to contain gold ; but, from the recent investigations of experts, it appears very doubtful whether its extraction either from the alluvium or from any of the quartz veins can ever prove remunerative. Iron ore of an inferior quality abounds throughout the District, and is smelted by the old native process and used for the manufacture of agricultural implements, &c. In the south-east of the Tamār *pargana* a soft kind of steatite allied to soapstone is dug out of small mines and converted into various domestic utensils. The mines go down in a slanting direction, and in one or two instances a depth of about 150 feet has been reached. The harder and tougher kinds of trap make good road-metal, while the softer and more workable forms of granite are of easy access and are much used for the construction of piers and foundations of bridges and other buildings. Mica is found in several localities, especially near Lohārdagā and elsewhere in the north of the District, but not in sufficient quantities or of a quality good enough to make it worth mining.

The chief industry is the manufacture of shellac. The lac insect is bred chiefly on the *kusum* (*Schleichera trijuga*) and *palās* (*Butea frondosa*) trees, and shellac is manufactured at some half-dozen factories, the largest being at Rānchī and Būndu.* Arts and manufactures. Brass and bell-metal articles are manufactured at Lohārdagā, and coarse cotton cloths are woven throughout the District.

The chief exports are rice, oilseeds, hides, lac, and tea. Commerce. Myrabolams (*Terminalia Chebula*) are also extensively exported. The chief imports are wheat, tobacco, sugar, *gur*, salt, piece-goods, blankets, and kerosene oil. The principal places of trade are Rānchī, Lohārdagā, Būndu, Pālkot, and Gobindpur. In the west of the District, owing to the frequent *ghāts* with only bridle-paths across them, the articles of commerce are carried by strings of pack-bullocks, of which great numbers may be met after the harvest season, passing in or out of Barwe to trade either in Rānchī or in the Jashpur and Surgujā States.

No railways enter the District, and practically the whole of Roads. the external trade is carried along the cart-road which connects Rānchī town with Purūlia on the Bengal-Nāgpur Railway. This road, and those to Chaibāsa and Hazāribāgh, with an aggregate length in the District of about 100 miles, are maintained by Government. There are also 919 miles of road

(including 170 miles of village tracks) maintained by the District board. The most important of these are a gravelled road, 52 miles in length, connecting Rānchī with Lohārdagā, and unmetalled roads from Rānchī to Būndu and Tamār, Pālkot, Bero, and Kurdeg, and Sesai, whence one branch runs to Lohārdagā and another through Gumla. There is a ferry over the South Koel river, where it crosses the road to the new subdivisional head-quarters at Gumla ; but as a rule ferries are little used, as the rivers, when not easily fordable, become furious hill torrents which it is dangerous to cross.

Famine.

The District was affected by the famine of 1874, and the harvests were very deficient in 1891, 1895, 1896, and 1899 ; but it was only on the last two occasions that relief operations were found necessary. In 1897 the test works at first failed to attract labour, and it was hoped for a time that the people would be able to surmount their trouble without help from Government. Distress subsequently manifested itself in the centre of the District, but relief operations were at once undertaken and the acute stage was of very short duration. Altogether 52,710 persons found employment in relief works, and gratuitous relief was given to 153,200 persons, the expenditure from public funds being Rs. 18,000. The District was, however, never officially declared affected, and relief operations were carried on only for a few months on a small scale. In 1900 relief works were opened in ample time ; the attendance on them was far higher than in the previous famine ; and the distress that would otherwise have ensued was thus to a great extent averted. The area affected was 3,052 square miles, with a population of about 493,000 persons ; and in all, 1,134,287 persons (in terms of one day) received relief in return for work and 516,400 persons gratuitously, the expenditure from public funds being 2.3 lakhs. The distress was most acute in the centre and west of the District, but, as far as is known, there were no deaths from starvation.

District subdivisions and staff.

In 1902 the District was divided into two subdivisions with head-quarters at Rānchī and Gumla, and in 1905 a third subdivision was formed with head-quarters at Khunti. The staff at head-quarters subordinate to the Deputy-Commissioner consists of a Joint and five Deputy-Magistrate-Collectors, while the Gumla subdivision is in charge of a Joint, and the Khunti subdivision of a Deputy-Magistrate-Collector.

Civil and criminal justice.

The chief court of the District, both civil and criminal, is that of the Judicial Commissioner, who is the District and Sessions Judge. The Deputy-Commissioner has special powers

under section 34 of the Code of Criminal Procedure to try all cases not punishable with death. The civil courts include those of the Deputy-Collectors who try all original rent suits, of two Munsifs at Rānchī and Gumla who have also the powers of a Deputy-Collector for the trial of rent suits, and of a special Subordinate Judge for the combined Districts of Hazāribāgh and Rānchī. The most common crimes are burglaries and those which arise from disputes about land; the latter are very frequent owing to the unsettled nature of rights and areas, the ignorance of the common people, and the greed of indifferent and petty landlords. Murders are unusually frequent, as the aboriginal inhabitants are heavy drinkers, believe in witchcraft, and have small regard for life.

The country was originally in the sole possession of the aboriginal settlers, whose villages were divided into groups or *parās* each under its *manki* or chief. These chiefs were subsequently brought under the domination of the Nāgbansi Rājās, who became Hinduized and by degrees lost sympathy with their despised non-Hindu subjects. The Mahārājās in course of time made large grants of land for the maintenance of their relatives, military supporters, and political or domestic favourites, who fell into financial difficulties and admitted the *dikka* or alien adventurer to prey upon the land. To one or other of these stages belong all the tenures of the District. They are very numerous, but can be generally classified under four heads: the Rāj or Chotā Nāgpur estate; tenures dependent on the Mahārājās and held by subordinate Rājās; maintenance and service tenures; and cultivating tenures. The second and third classes of tenures are held on a system of succession peculiar to Chotā Nāgpur, known as *putra-putrādik*, which renders them liable to resumption in case of failure of male heirs to the original grantee. As the Chotā Nāgpur Rāj follows the custom of primogeniture, maintenance grants are given to the near relatives of the Mahārājā. The chief service grants are: *bāraiḱ*, given for military service and the upkeep of a militia; *bhuiyā*, a similar tenure found in the south-west of the District; *ohdur*, for work done as *diwān*; *ghātwāl*, for keeping safe the passes; and a variety of revenue-free grants, *brāhmottar* or grants to Brāhmans, and *debottar* or lands set apart for the service of idols. Cultivating tenures may be classified as privileged holdings, ordinary *ryoti* land known as *rajhas*, and proprietors' private land or *manjhihas*. The privileged holdings are those which were in the cultivation of the aboriginal settlers before the advent of the Hindu landlords and the ^{Land revenue.}

importation of cultivators alien to the village. They include *bhuinharī*, with the cognate tenures known as *bhutkhetā* (land set aside for support of devil propitiation), *dāhkatāri*, *pahnai*, and *mahatī*. The last two are lands held by the *pahn* and *māhato*, the village priest and headman. In some parts the privileged lands of the old settlers are known as *khuntkhatti*, and include the *pahn khunt*, the *mundā khunt*, and the *māhato khunt*. The *mundā* is the village chief responsible for the payment of the *khuntkhatti* rents to the *mānki* of the circle of the villages, while the *māhato*, a later importation, is the headman from the point of view of the Hindu landlord, whose interests he guards by assisting in the realization of the rent of the *rajhas* and cultivation of the *manjhihas* lands. These latter include *bethkhetā*, or land set aside for the provision of labour for cultivation of the remaining private lands. As in other parts of Bengal, attempts to add to private lands are constantly made; but the tendency received a salutary check from the demarcation, mapping, and registering of *bhuinharī* and private lands under the Chotā Nāgpur Tenures Act of 1869. By the original custom of the country, now gradually passing away, rent was as a rule assessed only on the low lands or *dons*. On an average of ten villages in the Government estates in 1897, the rates per acre for low lands were found to range between Rs. 1-2-3 and Rs. 2-1-6, and for high lands between 1½ and 4 annas. These rates are very much lower than those prevalent in *samāndāri* villages, where Rs. 8 to Rs. 10 is often charged for an acre of first-class low land. The uplands, when not paying cash rent, are usually liable to the payment of produce rent known as *rukumāt*, which varies a good deal in different parts, and the cultivators are liable to give a certain amount of free labour (*beth begār*) to the landlord.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees :—

	1880-1	1890-1	1900-1 *	1903-4.
Land revenue . .	95	1,06	48	52
Total revenue . .	4,91	7,14	5,93	6,61

* The diminution in the receipts is due to the fact that Palāmau was formed into a separate District in 1892

Local and
municipal
govern-
ment.

Outside the municipalities of RĀNCHĪ and LOHĀRDAGĀ, local affairs are managed by the District board. In 1903-4 its income was Rs. 1,04,000, including Rs. 39,000 derived from rates; and the expenditure was Rs. 1,09,000, the chief items

being Rs. 50,000 spent on public works and Rs. 39,000 on education.

The District contains 16 police stations or *thānas* and 16 Police and outposts. In 1903 the force subordinate to the District Superintendent consisted of 3 inspectors, 33 sub-inspectors, 42 head constables, and 352 constables. There was, in addition, a rural police force of 24 *daffadārs* and 2,442 *chaukidārs*. The District jail at Rānchī has accommodation for 217 prisoners, and a subsidiary jail at Gumla for 21. ^{jails.}

Education is backward, only 2.7 per cent. of the population Education. (5.1 males and 0.5 females) being able to read and write in 1901. Great progress is now being made, and the number of pupils under instruction rose from 12,569 in 1892-3 to 19,132 in 1900-1. In 1903-4, 19,074 boys and 2,514 girls were at school, being respectively 22.0 and 2.7 per cent. of the children of school-going age. There were in that year 857 schools: namely, 15 secondary, 825 primary, and 17 special schools. The most important of these are the District schools, the German Evangelistic Lutheran Mission high school, the first-grade training school, the Government industrial school, and the blind school, all in Rānchī town. The expenditure in 1903-4 was Rs. 1,55,000, of which Rs. 19,000 was derived from Provincial revenues, Rs. 38,000 from District funds, Rs. 700 from municipal funds, Rs. 22,000 from fees, and Rs. 75,000 from other sources.

The District contains 6 dispensaries, of which 3 possess Medical. accommodation for 49 in-patients. The cases of 18,348 out-patients and 369 in-patients were treated in 1903, and 768 operations were performed. The expenditure was Rs. 18,000; and of the income Rs. 1,100 was contributed by Government, Rs. 1,000 by District funds, Rs. 5,000 by Local funds, Rs. 3,000 by municipal funds, and Rs. 9,000 by subscriptions. The principal institution is the Rānchī dispensary. A small leper asylum at Lohārdagā is conducted by the German mission.

Vaccination is compulsory only in municipal areas, but good Vaccination. progress is being made throughout the District, and in 1903-4 the number of persons successfully vaccinated was 43,000, or 37.3 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi (1877); F. A. Slacke, *Report on the Settlement of the Estate of the Mahārājā of Chotā Nāgpur* (Calcutta, 1886); B. C. Basu, *Report on the Agriculture of the District of Lohārdagā* (Calcutta, 1890); *Papers relating to the Chotā Nāgpur Agrarian Disputes* (Calcutta, 1890); E. H. Whiteley, *Notes on the*

Dialect of Lohārdagā (Calcutta, 1896); F. B. Bradley-Birt, *Chotā Nāgpur* (1903).

Rānchī Subdivision.—Head-quarters subdivision of the District of the same name, Bengal, lying between $22^{\circ} 21'$ and $23^{\circ} 43'$ N. and $84^{\circ} 0'$ and $85^{\circ} 54'$ E., with an area of 2,366 square miles. The subdivision consists of an elevated undulating table-land, where permanent cultivation is almost confined to the terraces cut in the slopes of the depressions which lie between the ridges. The population in 1901 was 753,236, compared with 730,642 in 1891, the density being 215 persons per square mile. In 1901 it comprised 3,506 square miles; but owing to the formation of the Khunti subdivision in 1905, the area was reduced to 2,366 square miles with a population of 527,829 and a density of 223 persons per square mile. The subdivision contains two towns, RĀNCHĪ (population, 25,970), the head-quarters, and LOHĀRDAGĀ (6,123); and 1,417 villages.

Gumla Subdivision.—South-western subdivision of Rānchī District, Bengal, lying between $22^{\circ} 21'$ and $23^{\circ} 38'$ N. and $84^{\circ} 0'$ and $85^{\circ} 6'$ E., with an area of 3,622 square miles. The subdivision is part of the undulating elevated plateau of Chotā Nāgpur; but to the west and south the surface is more broken, the hills are steeper, and the valleys are replaced by ravines. The plateau falls away to the south, while the level of the country rises, and there is another and higher plateau to the west. The population in 1901 was 434,689, compared with 398,243 in 1891, the density being 120 persons per square mile. The subdivision contains one town, PĀLKOT (population, 3,246); and 1,157 villages, of which GUMLA is the head-quarters.

Khunti Subdivision.—South-eastern subdivision of Rānchī District, Bengal, lying between $22^{\circ} 38'$ and $23^{\circ} 18'$ N. and $84^{\circ} 56'$ and $85^{\circ} 54'$ E., with an area of 1,140 square miles. The subdivision, which was created in 1905, is an elevated table-land; but to the south the surface is broken and the undulating ridges and valleys give place to steep hills and ravines, terminating in a comparatively open plain to the south-east towards Mānbhūm. It had a population in 1901 of 225,407, compared with 198,730 in 1891, the density being 198 persons per square mile. It contains one town, BĪNDU (population, 5,469); and 599 villages, of which KHUNTI is the head-quarters.

Būndu.—Town in the Khunti subdivision of Rānchī District, Bengal, situated in $23^{\circ} 10'$ N. and $85^{\circ} 36'$ E. Population

(1901), 5,469. Būndu is the centre of the lac industry in the District and a flourishing trade mart.

Chutiā.—Village in the head-quarters subdivision of Rānchī District, Bengal, situated in $23^{\circ} 21' N.$ and $85^{\circ} 21' E.$, 2 miles east of Rānchī town. Population (1901), 888. Chutiā was at one time the seat of the Nāgbansi Rājās, and this circumstance gave to their territory the designation of Chotā (a corruption of Chutiā) Nāgpur.

Gumla Village.—Head-quarters of the subdivision of the same name in Rānchī District, Bengal, situated in $23^{\circ} 2' N.$ and $84^{\circ} 33' E.$ Population (1901), 777. It is a flourishing trade centre.

Khunti Village.—Head-quarters of the subdivision of the same name in Rānchī District, Bengal, situated in $23^{\circ} 5' N.$ and $85^{\circ} 16' E.$ Population (1901), 1,446. It is a trade centre of some importance on the road from Rānchī to Chaibāsa.

Lohārdagā.—Town in the head-quarters subdivision of Rānchī District, Bengal, situated in $23^{\circ} 26' N.$ and $84^{\circ} 41' E.$, 47 miles west of Rānchī town. Population (1901), 6,123. Lohārdagā was until 1840 the head-quarters of the District, which was formerly called after it. It was constituted a municipality in 1888. The income during the decade ending 1901-2 averaged Rs. 4,600, and the expenditure Rs. 3,700. In 1903-4 the income was Rs. 4,400, half of which was obtained from a tax on persons (property tax); and the expenditure was Rs. 4,700. A small leper asylum is maintained by a German mission.

Marang Buru.—Hill on the edge of the plateau of Hazāribāgh District, Bengal, situated in $23^{\circ} 33' N.$ and $85^{\circ} 27' E.$, on the boundary line between Hazāribāgh and Rānchī Districts. It rises 2,400 feet above the valley of the Dāmodar and 3,445 feet above sea-level. It is an object of peculiar veneration to the Mundās, who regard Marang Buru as the god of rainfall, and appeal to him in times of drought or epidemic sickness.

Pālkot.—Town in the Gumla subdivision of Rānchī District, Bengal, situated in $22^{\circ} 52' N.$ and $84^{\circ} 39' E.$ Population (1901), 3,246. It is one of the principal trade centres in the District, and the head-quarters of a police circle, and has given its name to a *pargana*.

Rānchī Town.—Head-quarters of the District of the same name and also of the Chotā Nāgpur Division, Bengal, situated in $23^{\circ} 23' N.$ and $85^{\circ} 20' E.$, on the Chotā Nāgpur plateau, about 2,100 feet above sea-level. Population (1901), 25,970

(including 2,844 within cantonment boundaries), of whom 12,968 were Hindus, 7,547 Musalmāns, 3,640 Christians, and 1,807 Animists. Rānchī is a station of the Lucknow division of the Northern Command, and the wing of a Native infantry regiment is stationed in the cantonments (formerly known as Dorunda cantonments), which lie 2 miles to the south of the town. It is also the head-quarters of the Chotā Nāgpur Volunteer Mounted Rifles, of the Superintending Engineer of the Western Circle, and of the Executive Engineer of the Chotā Nāgpur Division. It is connected by good metalled roads with Purūlia, Hazāribāgh, and Chaibāsa, and is a large trade centre. It is the chief seat of Christian missionary enterprise in Bengal, and is the head-quarters of three important missions (*see* RĀNCHĪ DISTRICT). Rānchī was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 23,000, and the expenditure Rs. 22,000. In 1903-4 the income was Rs. 35,000, mainly derived from a tax on houses and lands and a conservancy rate; and the expenditure was Rs. 32,000. The natural drainage of the town is excellent, and plenty of good water can be obtained from wells. The town contains the usual public buildings; the District jail has accommodation for 217 prisoners, who are employed on the manufacture of oil and of rope from aloe fibre. The most important schools are the District school, with 338 pupils on its rolls in 1902; the German Evangelistic Lutheran Mission high school, intended chiefly for the education of Christian converts, with 230 pupils; the first-grade school for vernacular teachers, with 22 pupils, the Government industrial school, and the blind school. In the industrial school the pupils, who in 1902 numbered 50, receive stipends varying from R. 1 to Rs. 3 per month, and are taught carpentering and blacksmiths' work, &c., together with a certain amount of reading, writing, free-hand drawing, elementary arithmetic, and practical geometry. The course of instruction at the blind school, which had 20 pupils, includes reading by means of raised type representing letters, cane-work, *newār* weaving, and mat-making. It is proposed to build a large asylum for European and Eurasian lunatics from Northern India at Rānchī.

Sāru.—Hill in the Gumla subdivision of Rānchī District, Bengal, situated in 23° 30' N. and 84° 28' E. It is 3,615 feet above sea-level, and is the highest peak on the Chotā Nāgpur plateau.

Boun-
daries, con-

Palāmau ('a place of refuge').—District in the Chotā Nāgpur Division of Bengal, lying between 23° 20' and 24° 39' N.

and $83^{\circ} 20'$ and $84^{\circ} 58' E.$, with an area of 4,914 square miles. It is bounded on the north by Shāhābād and Gayā; on the east by Gayā, Hazāribāgh, and Rānchī; on the south by Rānchī and the State of Surgujā; and on the west by Surgujā and the Mirzāpur District of the United Provinces. figuration,
and hill
and river
systems.

The District consists of a confused aggregation of hills, offshoots from the Chotā Nāgpur plateau, and of the valleys between them. The hills run in the main east and west, though many are at right angles to the general trend. They are highest in the south, where they adjoin the Surgujā plateau, and gradually decrease in size towards the north. The District comprises four distinct tracts, which are roughly conterminous with the four old fiscal divisions or *parganas*. By far the largest is *pargana* Palāmau, which forms the greater portion of the District, consisting of jungle-clad hills and fertile but narrow valleys. *Pargana* Torī is an undulating but in many places highly cultivated tract, with a few large isolated hills; until recently it formed part of the head-quarters subdivision of Rānchī District, and its tenures, people, and customs are quite distinct from those of Palāmau. *Pargana* Belaunjā in its southern portion closely resembles Palāmau, but towards the north it sinks into an extremely fertile valley into which the Son yearly overspills. *Pargana* Japlā, in the extreme north of the District, is a tract almost devoid of hills and very similar to the alluvial portion of the District of Gayā. The Son flows along the northern border, but the most important river is the Koel. This rises in Barwe in Rānchī District, and after flowing nearly due west for about 24 miles, turns northwards, passing through the centre of Palāmau, and joins the Son not far from the old fort of Rohtāgarh; its chief affluents are the Aurangā and Amānat. The Kanhar flows in a north-westerly direction along the Surgujā boundary, and eventually joins the Son in Mirzāpur District.

The characteristic formation of Palāmau is gneiss, of which all the more important hill ranges are composed. It is of extremely varied constitution, including granitic gneisses, mica schists, magnetite schists, huge beds of crystalline limestone, &c. Along the north-west boundary of the District is the eastern termination of a large outcrop of Bijāwar slates, which extends westwards for nearly 200 miles through Mirzāpur and Rewah. The Lower Vindhya, which rest unconformably upon the Bijāwars, are found along the valley of the Son, where representatives of the Garhbandh, porcellanic, and Khinjua groups are found; the first mentioned contains two

subdivisions, a lower one consisting of conglomerates, shales, limestones, sandstones, and porcellanites, and an upper band of compact limestone of 200 or 300 feet in thickness. The rocks of the porcellanic group, which overlies the Garhbandh, are indurated, highly siliceous volcanic ashes; their thickness increases as they approach the former centres of volcanic activity in the neighbourhood of Kutumbā, Nabīnagar, and Japlā. The shales and limestones of the Khinjua group are mostly concealed by alluvium along the banks of the Son. As the Vindhya are unfossiliferous, their geological age cannot be exactly determined, but there is reason to think that they may be as old as Cambrian.

The next formation, the Gondwāna, contains numerous fossil plants, which determine its age partly as upper palaeozoic and partly as mesozoic. It is of great economic importance on account of the coal and iron ore which it contains. It comprises in Palāmau the Mahādeva, Pānchet, Rāniganj, Barākar, and Tālcher divisions. The rocks of this formation generally weather into low undulating ground, but those of the Mahādeva group rise into lofty hills. The coal-seams are restricted to the Barākar and Rāniganj groups, which consist of alternating layers of shale and sandstone; the workable seams are found chiefly in the Barākar. The Pānchet and Mahādeva groups consist principally of sandstones, and the Tālcher mostly of shales; the Tālchers, which are the oldest Gondwāna rocks, contain at their base a conglomerate, consisting of large boulders embedded in clay, which is supposed to be of glacial origin. The Aurangā, Hutar, and Daltongan coal-fields are situated entirely in Palāmau, which also contains the western extremity of the large Karanpurā field. The boundaries of the coal-fields are usually faults, whose position is indicated by lines of siliceous breccia, and hot sulphurous springs are frequent along them. The best coal is that in the Daltongan field.

Near the southern edge of the District, the lofty flat-topped hills known as *pāts* are capped by great masses of laterite, resulting from the decomposition of basaltic beds of the Deccan trap formation. The largest of these is the vast Neturhāt plateau west of the Koel river. A few intrusive dikes of the same formation occur in the Daltongan and Hutar coal-fields.

Along the Son, especially below its confluence with the Koel, the rocks are concealed by deep alluvium, which merges into the alluvial formation of the Gangetic plain. Alluvial soil is scattered over many other parts of the District, and

nearly everywhere contains in great abundance the calcareous concretions known as *kankar*¹.

The rice-fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky ; but, where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is prominent. The steeper slopes are covered with a dense forest mixed with many climbers. *Sāl* (*Shorea robusta*) is gregarious ; among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adina*, which these forests share with the similar forests on the Lower Himālayan slopes. Mixed with them, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soymda*, *Boswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain. One of the features of the flowering trees is the wealth of scarlet blossom in the hot season produced by the abundance of *Butea frondosa* and *B. superba*. Botany.

The chief wild animals to be met with are tigers, leopards, black bears, bison, *sāmbār*, *chitra* (spotted deer), *chinkāra*, four-horned deer, barking-deer, *nīlgai*, antelope, and wild dogs. The Government 'reserved' forests form a shelter for game ; and though tigers have probably diminished in number of late years, bison and deer have considerably increased, in spite of the ravages committed by wild dogs. Fauna.

Palāmau enjoys a moderate temperature, except during the hot months of April, May, and June, when the westerly winds from Central India cause great heat, combined with very low humidity. The mean temperature increases from 74° in March to 86° and 94° in April and May, the mean maximum from 88° in March to 107° in May, and the mean minimum temperature from 59° in March to 81° in June. During these months humidity is lower in Chotā Nāgpur than in any other part of Bengal, falling in this District to 57 per cent. in March, 46 per cent. in April, and 51 per cent. in May. The mean temperature for the year is 77°, falling to 61° during the cold season, when the minimum temperature is 47°. The annual rainfall Temperature and rainfall.

¹ Detailed descriptions of the Geology of Palāmau have been published in the *Memoirs of the Geological Survey*: the Hutar and Aurangā coal-fields, the gneiss, and the iron ores have been described by V. Ball, in vol. xv, part i; the Daltongan coal-field by Th. Hughes in vol. viii, part ii; the Karanpurā coal-field by Th. Hughes in vol. vii, part iii; the Lower Vindhya generally by F. Mallet, vol. vii, part i; and the volcanic rocks of that series by E. Vredenburg, vol. xxxi, part i.

averages 49 inches, of which $6\frac{1}{2}$ inches fall in June, 14 each in July and August, and 8 in September.

History

Reliable history does not date back beyond 1603, when the Raksel Rājputs were driven out by the Cheros under Bhagwant Rai, who took advantage of the local Rājā's absence at a ceremony at Surgujā to raise the standard of revolt. The Chero dynasty lasted for nearly 200 years, the most famous of the line being Medni Rai, surnamed 'the just,' who ruled from 1659 to 1672 and extended his Rāj into Gayā, Hazāribāgh, and Surgujā. The erection at Palāmau of the older of the two forts which form the only places of historical interest in the District is ascribed to him, the other, which was never completed, was begun by his son. These Rājās apparently ruled as independent princes till between 1640 and 1660, when the Muhammadans made several attacks on them and forced them to pay tribute. In the latter year occurred the attack on Palāmau fort and its capture by Daud Khān, which forms the subject of a large picture (30 feet by 12) preserved by Daud's descendants and described in detail by Colonel Dalton in the *Journal, Asiatic Society of Bengal*, 1874. In 1722 the ruling Rājā, Rānjit Rai, was murdered, and Jay Kishan Rai, descended from the younger son of a former Rājā, was placed upon the throne. A few years afterwards Jay Kishan was shot in a skirmish, and his family fled to Megrā in Bihār. Here they took refuge with one Udwant Rām, a *kānungo*, who in 1770 took Gopāl Rai, grandson of the murdered Rājā, to Patna and presented him to Captain Camac, the Government Agent, as the rightful heir to the Palāmau Rāj. Captain Camac promised the assistance of the British Government and, after defeating the troops of the ruling Rājā, gave a *sanad* for five years to Gopāl Rai and two of his cousins. From this time Palāmau was included in the British District of Rāmgarh. A year or two later, Gopāl Rai was sentenced to imprisonment for being concerned in the murder of the *kānungo* who had helped him to power. He died at Patna in 1784, and in the same year died Basant Rai, who had succeeded to the *gaddi* on his imprisonment. Churāman Rai succeeded; but by 1813 he had become insolvent, and Palāmau was sold for arrears of revenue and bought in by Government for the amount due. Three years later old disturbances between the Kharwārs and Cheros were renewed, and Palāmau was given to the Deo family in Gayā as a reward for their services in helping to quell them. Their régime, however, was unpopular, and in a year the country was in open rebellion. So Government was

again forced to take up the management of the estate, giving the Deo family as compensation a reduction of Rs. 3,000 in the Bihār revenue payable on their estates in Bihār. In 1832 the Kharwārs and Cheros again broke out in rebellion, but this rising was soon put down. There were no further troubles until the Mutiny of 1857, when the Kharwārs rose against their Rājput landlords; and the mutineers of the Rāmgarh Battalion, taking refuge in Palāmau, made common cause with Nīlāmbar and Pitāmbar Singh, two malcontent landholders. The 26th Madras Native Infantry and a portion of the Rāmgarh Battalion which had remained loyal defeated the insurgents at the Palāmau forts. Nīlāmbar and Pitāmbar Singh were taken prisoners and hanged. In 1834 Palāmau was included in the District of Lohārdagā (now Rānchī), and was formed into a separate District in 1892.

The population of the present area increased from 423,795 ^{The} in 1872 to 551,075 in 1881, 596,770 in 1891, and 619,600 ^{people.} in 1901. The striking increase between 1872 and 1881 is attributable partly to the greater accuracy of enumeration in 1881, and partly to the impetus given to enlightened management of estates, and consequently to the extension of cultivation, which followed the settlement of the Government estates made in 1869-70. The northern part of the District is healthy, but not the southern portion. The population is contained in 3,184 villages and two towns, DALTONGANJ, the head-quarters, and GARWĀ. The District is very sparsely inhabited, the number of persons per square mile being only 126. The density is greatest in the alluvial valleys along the course of the Koel and Amānat rivers and on the right bank of the Son. Elsewhere, and especially in the south and west, the country is wild and inhospitable, and is inhabited mainly by forest tribes, who eke out their precarious crops of oilseeds, maize, and cotton with the blossoms of the *mahuā* tree and other products of the jungle. There is some emigration to Assam. Only 7,000 persons enumerated there in 1901 were entered as natives of Palāmau; but it is believed that, owing to the recent creation of the District, many of the Palāmau emigrants returned their birthplace as Lohārdagā, and were therefore assigned to the category of those born in Rānchī. All but about 6 per cent. of the population speak Hīndī, in most cases a patois of the Bhojpurī dialect known as Nāgpurī, which has borrowed some of its grammatical forms from Chhattisgarhī; 3.5 per cent. speak Oraon, a language of the Dravidian family; and 2.7 per cent. speak dialects of the

Mundā family, chiefly Mundārī, Birjia, and Korwā. Of the total, 86 per cent. are Hindus, 8·4 per cent. Muhammadans, and 4·2 Animists. Those returned as Hindu include large numbers of semi-Hinduized aborigines.

Castes and occupations.

The largest tribes and castes are Bhuiyās (53,000), Kharwās (42,000), and Ahīrs; among other Dravidian tribes distinctive of this neighbourhood may be mentioned the Bhogtās, Korwās, Nagesias, and Parhaiyās. The Cheros were at one time a dominant race in South Bihār; they are known in Palāmau District as 'the 12,000,' it being popularly asserted that at the beginning of their rule in Palāmau they numbered 12,000 families. Agriculture supports 72 per cent. of the population, industries 11·7 per cent., and the professions 0·8 per cent.

Christian missions.

Christians number 7,908, of whom 7,897 are natives. Nearly all reside in the Mahuādānd *thāna*, where a Roman Catholic mission is at work and has built a church and a school.

General agricultural conditions.

The *rabi* and *bhadoi* crops, especially the former, are very precarious, owing to the lightness and uncertainty of the rainfall, and the rapidity with which all water runs off to the main streams. The rice crop is even more precarious, except where means of storing up water to irrigate the fields have been provided. A few of the more enlightened *zamīndārs* have done a great deal to this end, by throwing embankments across the natural slope of the country and diverting small streams to fill these rude reservoirs; much has also been done by Government in the estates under its direct management. Rice lands have all to be laboriously constructed by terracing off favourable hollows or filling up the beds of streams with the earth from their banks. For agricultural purposes the District consists broadly of two interlacing zones. The first consists of the valleys of the Amānat, the Koel, and the Son, and contains stretches of fertile clay covered with rice, sugar-cane, and various *rabi* crops. The second comprises the hilly areas which are generally covered with a thin loose gravelly soil; and the population is chiefly dependent for its sustenance on the *bhadoi* crops. The most fertile soil is a black friable clay known as *kewāl*, found in abundance in the valleys and also, though without any great depth, in the uplands. It is very retentive of moisture and produces good crops of rice, wheat, and barley; in many cases *khesāri* (*Lathyrus sativus*) is grown on it after the rice has been harvested.

Chief agricultural

In 1903-4 the cultivated area was estimated at 577 square miles, current fallows at 588 square miles, and other cultivable

waste at 1,072 square miles. Rice, which is the staple crop in the valleys, is grown on 238 square miles, the winter crop being the most important; maize covers 55 square miles; while other cereals, including *maruā*, gram, barley, wheat, millets such as *kodon*, *sāwān*, and *gondli*, and pulses, chiefly *rahar* and *khesāri*, cover an area of 335 square miles. The chief miscellaneous crops are sugar-cane, oilseeds, cotton, and poppy.

Cultivation is extending fast, and it is estimated that in the Government estates the increase amounted to 9 per cent. during the seven years ending 1903. In private estates the further spread of cultivation depends on the degree to which the individual landlords attend to the wants of their ryots in the matter of irrigation. Spasmodic attempts have been made to improve the quality of crops by the selection of seed, but greater success has attended the introduction of new varieties; and sugar-cane, chillies, linseed, potatoes, and gram are being grown more extensively than they were a few years ago. No use was made of the Land Improvement and Agriculturists' Loans Acts till 1896, but in the six following years Rs. 1,40,000 was advanced, most of which has been repaid. In 1902-3 the operations were further extended, Government advancing Rs. 20,000 to *samīndārs* under the former Act and Rs. 38,000 to tenants under the latter Act.

The Cattle are poor; they are grazed in the jungles, and in the hot months large numbers are sent to the high lands in the south and south-west and to the Surgujā State, where pasture is abundant.

Irrigation is mainly confined to the construction of reservoirs or *bāndhs*, the more useful and valuable of which are filled by the waters of diverted streams. Great skill is often shown in planning and carrying out these schemes, and water is frequently carried by means of rude channels and raised embankments for a distance of 6 or 7 miles. These works are extraordinarily remunerative, and seldom yield a profit of less than 20 to 25 per cent. It is estimated that half the area under rice is irrigated in this manner; practically the only other crops irrigated are sugar-cane, poppy, chillies, and garden produce.

The District contains 260 square miles of forest, of which 188 square miles are 'reserved' forest under the management of the Forest department, and the remainder are 'protected' forests under the control of the Deputy-Commissioner. The latter comprise the surplus area left in each Government

village after allotting to the tenants for extending cultivation twice as much waste as there is cultivated land. The 'reserved' forests lie chiefly in the south of the District, the Barasand, the largest block, extending over 89 square miles to the south of the Koel river. The most valuable tree is the *sāl* (*Shorea robusta*), which grows best in the more fertile soil along the foot of the hills. It is here found in places almost pure; higher up mixed species become more abundant, and on the sides and tops of the hills, where the soil is poorer, *sāl* ceases to grow. Other valuable trees are satin-wood (*Chloroxylon Swietenia*), ebony (*Diospyros melanoxylon*), and black-wood (*Dalbergia latifolia*), which are found in the mixed forest above the *sāl*, but not in sufficiently large size to ensure a steady revenue. The majority of the forests are remote from the railway, and revenue is at present chiefly derived from bamboos, which are generally sold at Rs. 2 per 1,000. Other minor products of limited importance are *sabai* grass (*Ischaemum angustifolium*), lac, and the fruit of the *mahuā* tree; gum kino is being experimentally extracted from the *Pterocarpus Marsupium* for use in dyeing and tanning. The receipts from the 'reserved' forests in 1903-4 amounted to Rs. 5,000. There are extensive private forests, but these are as a rule less valuable than those belonging to Government, the landlords having only lately begun to preserve them. Plantations of *mahuā*, teak, mahogany, *kusum*, and *divi-divi* plants have been made, but have not as yet gone beyond the experimental stage.

Minerals. The most important coal-field is that of Daltonganj, where the coal-bearing rocks in the valley of the North Koel river extend over an area of about 30 square miles, and the coal contains a good proportion of carbon. The Aurangā field has an area of 97 square miles and contains numerous coal-seams, some of large size, but the quality of the coal is indifferent. The Hutar field, which lies to the west of the Aurangā, has an area of about 79 square miles; the coal is somewhat inferior to that of Daltonganj. The Bāran-Daltonganj branch of the East Indian Railway now taps the Daltonganj field, and has brought the coal within reach of Cawnpore and other large manufacturing centres in the United Provinces. Mines were opened in 1902 at Rājbara and Singrā; the former mine was first worked in 1857, but it had been closed owing to difficulties of transport. The coal is worked by means of pits and inclined planes; the output in 1903 was 34,000 tons and on the average 1,200 hands were employed; the labourers are for the most

part Cheros and other local men. An immense quantity of iron ore is found all over the District, especially in the neighbourhood of the coal-fields. It is of three kinds: magnetite occurring in the gneiss, siderite with brown and red hematite in the Gondwāna, and red and brown hematite in the laterite. The ores from the Gondwāna are the most valuable. At present they are worked only to a small extent by some of the jungle tribes, and the out-turn is barely enough to satisfy local requirements. Limestone, sandstone, laterite, and graphite also exist, but difficulties of transport have hitherto prevented their being utilized. Copper has been found, but not in sufficient quantities to be worked profitably.

Arts and manufactures exist only in the most primitive form; and artisans do no more than supply the local demand for cotton cloth, brass utensils, silver and lac ornaments of the rudest kind, blankets, *tat* cloths for pack-bullock bags, rude country guns which sell at R. 1 for each span length of the barrel, and steel and iron for the manufacture of ploughs and *tāngis*, a rude kind of axe. *Ghī* is made, *tasar* silkworms are reared, and lac is produced for export. Arts and manufactures.

The chief exports are hides, lac, *ghī*, oilseeds, bamboos, catechu, and coal; and the chief imports are European piece-goods, salt, brassware, sugar, tobacco, kerosene oil, and rice; *ghī*, mustard, and hides are brought in from Surgujā. Except in the neighbourhood of the railway stations, where carts are used, the goods are carried on pack-bullocks. Most of the exports are sent in the first instance to Gayā or Dinapore. The chief trade centres are Garwā, Daltonganj, Hariharganj, Husainābād, Pathrā, and Chandwā. Barter is a common form of trading and affords great opportunities for profit to the middleman. Commerce.

The Daltonganj section of the East Indian Railway (opened in 1902) runs for 55 miles within the District. The District contains 322 miles of road (of which 26 are metalled), and 38 miles of village tracks. The principal lines are from Daltonganj to Gayā District via Hariharganj and Manātu, to Rānchī, to the extreme south of the District through the Government forests, and to Mirzāpur and Husainābād via the important market of Garwā; a good road from Garwā in the direction of Surgujā is under construction. Quicksands in the Koel and its great breadth are extremely unfavourable to the development of the country west of that river. Railways and roads.

Palāmau was visited by famine in 1897 and again in 1900. Famine. On the former occasion the number of workers relieved was

488,668 (in terms of one day) and on the latter 219,740; the numbers gratuitously relieved were 453,941 and 81,774 respectively. In 1897, 15,000 maunds of Burma rice were imported under a Government bounty of 8 annas per maund, and the leading *zamīndārs* rendered loyal assistance in the relief of their tenantry. The total expenditure by Government was Rs. 1,19,000 in 1897 and Rs. 30,000 in 1900.

Adminis-
tration.

The subdivisional system has not yet been introduced; and the administration of the whole District is carried on from Daltonganj, where the staff consists of the Deputy-Commissioner and two Deputy-Magistrate-Collectors.

Civil and
criminal
justice.

The principal civil and criminal court is that of the Judicial Commissioner of Chotā Nāgpur, who is stationed at Rānchī. The local criminal courts are those of the Deputy-Commissioner and the two Deputy-Magistrates. The Deputy-Commissioner has special powers under section 34 of the Criminal Procedure Code, and is also *ex-officio* Subordinate Judge of the District. A Munsif is stationed at Palāmau for the disposal of civil work. The crimes most characteristic of Palāmau are petty dacoities committed by the Korwās, a semi-savage tribe of the neighbouring Native State of Surgujā, and the poisoning of cattle for the sake of their hides.

Land
revenue.

In 1773 the Palāmau *pargana* was settled with Mahārājā Gopāl Rai for five years at a revenue of Rs. 5,000, rising to Rs. 12,000 in the third year. It was then settled for ten years at an annual revenue of Rs. 15,000. In 1812 the Mahārājā, Churāman Rai, was in arrears to the extent of Rs. 55,000; and the *pargana* was put up to public auction and bought in by Government for the amount due, thus becoming a Government estate. From that period to 1839, with the exception of the period during which Palāmau was given over to the Deo Rājās, the land revenue demand was *sicca* Rs. 25,000, of which Rs. 13,000 was payable by the *jāgīrdārs* under the Mahārājā and Rs. 12,000 was assessed on the *khālsa* villages under direct management. In 1839 the *khālsa* villages were settled with the farmer for twenty years at Rs. 12,000, and the rent payable by the *jāgīrdārs* was raised to Rs. 16,000. In 1859 the *khālsa* villages were summarily settled for three years for Rs. 22,000, and in 1863 a thirty years' settlement was concluded with the farmer for Rs. 36,000. This arrangement continued till 1896, when a new settlement for fifteen years was made direct with the ryōts. At the same time the *jāgīrdārs* were recognized as holders of permanently settled estates, the sum they were then paying to Government as the repre-

sentative of the Mahārājā of Palāmau being fixed as the revenue payable in perpetuity. The current demand of land revenue in 1903-4 was Rs. 1,07,000, of which Rs. 27,000 was payable by 255 permanently settled estates, Rs. 1,400 by 4 temporarily settled estates, and the remainder by the Government estates. The incidence of land revenue is only $4\frac{3}{4}$ annas per cultivated acre; the average rental is Rs. 2-14-4, but the amount varies with the nature of the land cultivated, the means for irrigating it, and its situation in the District. The best rice land lets for Rs. 10 to Rs. 15 an acre in parts of the Garwā and Patun *thānas*; Rs. 6 in the Government estates; and Rs. 4 to Rs. 6 in the south of the District. The best *shadoi* and *rabi* lands fetch only Rs. 6 to Rs. 8 an acre, while in the Government estates the maximum rate is Rs. 3. In some parts as much as Rs. 10 per acre is charged for land growing sugar-cane. The average area in possession of a tenant may be roughly estimated at 5.6 acres.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees, since the formation of the District:—

	1892-3	1900-1.	1903-4.
Land revenue . .	63	1,02	89
Total revenue . .	2,75	3,11	3,48

Outside the municipality of DALTONGANJ, local affairs are managed by the District board. Its income in 1903-4 was Rs. 80,000, of which Rs. 37,000 was derived from rates; and the expenditure was Rs. 96,000, including Rs. 55,000 spent on public works. Local and municipal government.

The District contains 10 police stations and 11 outposts. The force subordinate to the District Superintendent in 1903 consisted of 2 inspectors, 19 sub-inspectors, 24 head constables, and 213 constables. There was also a rural police force of 147 *daffadārs* and 1,109 *chaukidārs*, including 54 *ghātawāls* who are maintained to patrol the roads at the passes over the hills. A District jail at Daltonganj has accommodation for 124 prisoners. Police and jails.

Education is very backward, only 1.9 per cent. of the population (3.7 males and 0.1 females) being able to read and write in 1901; but since the constitution of the District in 1892 the number of pupils has increased from 4,317 to 8,328 in 1903-4, of whom 1,024 were girls. In the latter year 15.9 per cent. of the boys and 2.1 per cent. of the girls of school-

going age were at school. Of the 332 educational institutions, 11 provided for secondary and 311 for primary education, and there was a training school. The most important institution is the high school at Daltonganj. The total expenditure on education in 1903-4 was Rs. 50,000, of which Rs. 15,000 was contributed from Provincial revenues, Rs. 19,000 from District funds, and Rs. 13,000 from fees.

Medical. The District contains 4 dispensaries, of which that at Daltonganj has accommodation for 20 in-patients. Altogether, the cases of 12,495 out-patients and 341 in-patients were treated at these institutions in 1903, and 534 operations were performed. The expenditure was Rs. 5,000, the sources of income being Rs. 1,700 from Government, Rs. 2,500 from Local and Rs. 400 from municipal funds, and Rs. 1,100 from subscriptions.

Vaccination. Vaccination is not compulsory except in Daltonganj. In 1903-4 the number of persons successfully vaccinated was only 18,000, or 29.3 per 1,000 of the population. The mortality from small-pox is higher than in most Bengal Districts.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvi (1877); L. R. Forbes, *Settlement Report of Palamau* (Calcutta, 1875); B. C. Basu, *Report on the Agriculture of the District of Lohardaga* (Calcutta, 1890); D. Sunder, *Settlement Report of the Palamau District* (Calcutta, 1898).]

Daltonganj.—Head-quarters of Palāmau District, Bengal, situated in 24° 3' N. and 84° 4' E., on the North Kōel river. Population (1901), 5,837. It is named after Colonel Dalton, at one time Commissioner of Chotā Nāgpur. The town, which lies to the immediate south of the Daltonganj coal-field (see PALĀMAU DISTRICT), and is connected by a branch line with the East Indian Railway system, possesses a brisk local trade. Daltonganj was constituted a municipality in 1888. The income during the decade ending 1901-2 averaged Rs. 5,700, and the expenditure Rs. 4,900. In 1903-4 the income was Rs. 12,000, derived from various sources, such as a tax on persons (or property tax), a tax on houses and lands, the receipts from markets, and a conservancy rate; and the expenditure was Rs. 9,000.

Garwā.—Town in the Palāmau District of Bengal, situated in 24° 10' N. and 83° 50' E., on the Dānro river. Population (1901), 3,610. Garwā is the chief distributing centre for the surplus produce of the District, and of a great part of Surgujā State. Stick-lac, resin, catechu, cocoons of *tasar* silk, hides, oilseeds, *ghū*, cotton, and iron are here collected for export; the imports are food-grains, brass vessels, piece-goods, blankets,

silk, salt, tobacco, spices, drugs, &c. The market is held in the dry season on the sands of the Dānro river.

Mānbhūm.—District in the Chotā Nāgpur Division of Bengal, lying between $22^{\circ} 43'$ and $24^{\circ} 4'$ N. and $85^{\circ} 49'$ and $86^{\circ} 54'$ E., with an area of 4,147 square miles. It is bounded on the north by Hazāribāgh and the Santāl Parganas; on the east by Burdwān, Bānkurā, and Midnapore; on the south by Singhbhūm; and on the west by Rānchī and Hazāribāgh. The whole of the northern boundary is marked by the Barākar river; on the north-east, the Barākar and Dāmodar rivers separate the District from Burdwān; while the Subarnarekhā flows along the boundary for short distances on the west and south.

Mānbhūm District forms the first step of a gradual descent from the table-land of Chotā Nāgpur to the delta of Lower Bengal. The undulation so characteristic of Chotā Nāgpur here becomes less pronounced, and level tracts of considerable extent are of frequent occurrence. In the north and east the country is open, and consists of a series of rolling downs, dotted here and there with isolated conical hills. During the hot season the scarcity of trees gives to this part of the country a scorched and dreary appearance; but in the rains the fresh green of the young rice and the varying foliage of the low jungle form contrasts of colouring with the soil, and the scenery assumes a park-like aspect. In the west and south the country is more broken and the scenery far more picturesque. Here the Bāghmundi range striking out from the plateau of Chotā Nāgpur, and farther to the south the Dalmā range dividing Mānbhūm from Singhbhūm, stand up as commanding features in the landscape. These hills are covered almost to their summits with large and heavy forest. The principal hills are Dalmā (3,407 feet), the highest peak of the range of that name; Pānchkot or Pānchet (1,600 feet), situated to the north-east of Purūlia; and Gangabāri or Gajburu, the highest peak of the Bāghmundi plateau, situated about 20 miles south-west from Purūlia. The principal river is the Kāsai, which flows through the District from north-west to south-east and then turns almost due south as it passes into Midnapore; the total length of its course is about 171 miles. Just above Raipur the Kāsai forms rapids and several picturesque waterfalls of no great height. The DĀMODAR flows through Mānbhūm in an easterly direction with a slight inclination to the south. Its chief tributary, the BARĀKAR, has already been mentioned as forming part of the north-eastern boundary of the District, and the SUBARNAREKHĀ as dividing

it on the west and south from Rānchī and Singhbhūm. The only other rivers of any importance are the Dhalkisor, which rises in the east of Mānbhūm and after a short south-easterly course enters Bānkurā ; and the Silai, also rising in the east of the District and flowing south-east into Bānkurā.

Geology. The geological formations are the Archaean and the Gondwāna. The Archaean rocks consist of gneiss and crystalline schists, the gneiss occupying by far the largest portion of the District. It belongs principally to the group known as 'Bengal gneiss,' which is remarkable for its varied composition, consisting of successive bands of intermixed granitic, granulitic, and dioritic gneisses, and micaceous chloritic and hornblendic schists, with a laminated or foliated structure striking usually east and west. About the centre of the District is a great belt of unfoliated or only slightly foliated granitic intrusions, also striking east and west, and extending westwards into the adjacent District of Rānchī. Crystalline limestones occasionally occur. Along the southern boundary there exists a group of rocks resembling the Dhārwar schists of Southern India, which were originally sedimentary and volcanic, but have been altered into quartzites, quartzitic sandstones, slates of various kinds, hornblendic mica, and talcose and chloritic schists, the latter passing into potstones, greenstones, and epidiorites.

Quite close to the southern boundary of Mānbhūm the schists are invaded by a gigantic dike of basic igneous rock, forming an imposing east and west range which culminates in the lofty Dalmā hill. The schists are here more metamorphosed than elsewhere, with a considerable development of iron ores ; in this neighbourhood, moreover, the rocks are richest in gold.

The Gondwānas, whose age as determined by fossil plants is partly upper palaeozoic and partly mesozoic, are the principal rocks from an economic point of view. They occur along the Dāmodar river and form the Rāniganj coal-field, the western portion of which lies in Mānbhūm, and the rich Jherriā coal-field almost entirely situated within the District. The Gondwāna rocks comprise the Mahādeva, Pānchet, Rāniganj, ironstone shales, Barākar, and Tālcher divisions, of which all but the first belong to the Lower Gondwānas. The series consists throughout almost exclusively of shales and sandstones. The coal seams are restricted to the Barākar and Rāniganj divisions.

The coal-fields owe their preservation from denudation and their present situation to a system of faults that has sunk them

amidst the surrounding gneiss. The faults are easily recognized along their boundaries, especially on the south, and sulphurous hot springs are often situated in their neighbourhood. Innumerable fissures are occupied by intrusive dikes of basalt and of mica-apatite-peridotite, the latter being frequently detrimental to the coal seams, which have often been burnt away by it. These intrusions are of the same age as the volcanic rocks of the Rājmahāl hills¹.

The narrower valleys are often embanked for rice cultivation, and the rice-fields and their margins abound in marsh and water plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but where undulating is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is prominent. The steep slopes of the higher hills are covered with a dense forest mixed with climbers. *Sāl* (*Shorea robusta*) is gregarious; among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adina*, which these forests share with similar ones on the lower Himālayan slopes. Mixed with these, however, are a number of characteristically Central India trees and shrubs, such as *Cochlospermum*, *Soymida*, *Boswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain. One of the features of the upper edge of the hills is a dwarf palm, *Phoenix acaulis*; while the wealth of scarlet blossom in the hot season produced by the abundance of *Butea frondosa* and *B. superba* is also striking.

Tigers, leopards, bears, wolves, hyenas, deer, and wild dogs were formerly common, but are now decreasing in numbers, tigers being very rare visitors. The short-tailed Indian pangolin (*Manis pentadactyla*), which owing to its peculiar habits is one of the least-known quadrupeds in India, is occasionally found in the jungles bordering on Singhbhūm.

Temperature is moderate, except during the hot months of April, May, and June, when the westerly winds from Central India cause great heat with very low humidity. The mean temperature increases from 82° in March to 89° in April, May,

Temperature and rainfall.

¹ The Archaean series has been described by V. Ball, *Memoirs, Geological Survey of India*, vol. xviii, pt. ii; the Rāniganj coal-field by W. T. Blanford, *Memoirs*, vol. iii, pt. i; the Jherriā coal-field by Th. Hughes, *Memoirs*, vol. v, pt. iii, and by Th. Ward, *Records, Geological Survey of India*, vol. xxv, pt. ii; the mica-apatite-peridotites by T. H. Holland, *Records*, vol. xxvii, pt. iv.

The above account was contributed by Mr. E. Vredenburg of the Geological Survey of India.

and June, the mean maximum from 95° in March to 101° in May, and the mean minimum from 68° to 76°. The annual rainfall averages 53 inches, of which 8·9 inches fall in June, 13·4 in July, 13·2 in August, and 7·8 in September.

History. The distinctive tribe of the District is the Bhumij, who are closely allied to the Mundās and have been identified with the Bajra Bhūmi of Jain legendary history. The ancient Jains have left their traces in the ruins of temples near Purūlia and several places along the course of the Kāsai and Dāmodar rivers. But we have no authentic records of this part of the country till Muhammadan times, when it was regarded as part of the Jhārkand or 'forest tract,' which is the name given in the *Akbarnāma* to the whole region from Bīrbhūm and Pānchet to Ratanpur in the Central Provinces and from Rohtāgarh in South Bihār to the frontier of Orissa. In the *Bādshāhnāma* the *zamindār* of Pānchet is shown as a commander of horse under Shāh Jahān, and his *zamindāri* was subject to a fixed *peshkash*. The territory comprised in the present District of Mānbhūm was acquired by the British with the grant of the Dīwāni of Bengal, Bihār, and Orissa in 1765. Up to 1805 the estates contained in it were attached, some to Bīrbhūm and some to Midnapore; but in that year they were formed with a few others into a separate District called the JUNGLE MAHĀLS. In 1832 one Gangā Nārāyan, a claimant to the Barābhūm estate in this District, rose in rebellion, but was driven to Singhbhūm, where he died. As a result of these disturbances, a change of administration was determined upon, and by Regulation XIII of 1833 the District of the Jungle Mahāls was broken up; the estates of Senpahāri, Shergarh, and Bishnupur were transferred to Burdwān, while the remainder, with the estate of Dhalbhūm detached at the same time from Midnapore, were formed into the present District of Mānbhūm, which was withdrawn from the regular system of administration and placed under an officer called the Principal Assistant to the Agent to the Governor-General for the South-West Frontier. Subsequently, by Act XX of 1854, his title was changed to Deputy-Commissioner, and that of the Governor-General's Agent to Commissioner of Chotā Nāgpur. Dhalbhūm had again been transferred to Singhbhūm eight years previous to this, and the District of Mānbhūm was reduced to its present area by further transfers of minor importance in 1871 and 1879. When the District was first constituted, the civil station was fixed at Mānbāzār, but it was transferred to Purūlia in 1838. During the Mutiny of 1857 the military

garrison at Purūlia, which consisted of 64 sepoy of the Rāmgarrh battalion and 12 *sowārs*, all Hindustānis, plundered the treasury, released the prisoners in the jail, burnt the records, and then marched off towards Rānchī.

The District contains several interesting archaeological re- Archaeo-
mains. The most ancient of these are ascribed to the Jain logy.
Sārāks, including ruins at PALMĀ, CHARRĀ, Pākhirā, where a temple, belonging probably to the seventh century, contains a statue of the Jain hierarch Arnanāth, and Deoli, where there is a group of temples, one containing a fine Jain figure now also known as Arnanāth. Instances of early Brāhmanical architecture occur in the villages of Pāra and Katrās. A group of temples at Telkupī on the Dāmodar belongs apparently to the early part of the Muhammadan period. Other interesting ruins exist at DALMĪ, BORĀM, and PĀNCHET.

The population increased from 820,521 in 1872 to 1,058,228 The
in 1881, to 1,193,328 in 1891, and to 1,301,364 in 1901. people.
This rapid growth is due mainly to the healthiness of the climate and the fecundity of the aboriginal tribes who form the majority of the inhabitants; in 1881 it was also due in part to better enumeration, while recently the natural increase has been assisted by the opening up of the country by railways and the growth of the coal industry. Blindness and leprosy are exceptionally common.

The principal statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Purūlia . . .	3,344	3	4,273	1,024,242	306	+ 5.4	42,323
Gobindpur . .	803	...	1,248	277,122	345	+ 25.1	10,104
District total	4,147	3	5,521	1,301,364	314	+ 9.1	52,427

The three towns are PURŪLIA, the head-quarters, JHALIDĀ, and RAGHUNĀTHPUR. The density is greatest in the alluvial tract along the banks of the Dāmodar; in the broken country in the north-west and south the inhabitants are fewer, except in the neighbourhood of the Jherriā coal-field, where the mines attract large numbers of labourers. The Jherriā and Topchānchi *thānas* in the north-west, which contain the greater number of the collieries, grew by 75 and 30 per cent. respectively during the decade ending 1901, accounting between

them for over 45 per cent. of the total increase. A large number of immigrants, chiefly from Hazāribāgh, Bihār, and the United Provinces, come to work in the mines; but the emigrants, more than half of whom were enumerated in Assam, exceed the immigrants by over 74,000. The vernacular of the District is the western dialect of Bengali known as Rārhi *boli*. Along the western border this merges into Hindī, the dialect spoken being locally known as Kārmālī or Khottā, or even Khottā Bangalā. Santālī is spoken by 182,000 persons. Hindus number 1,132,619, or 87 per cent. of the total; Animists, 103,011, or 7.9 per cent.; and Muhammadans, 62,799, or 4.8 per cent.

Castes and
occupa-
tions.

The aboriginal element is strongly represented, the most numerous tribes being the Santāls (195,000, of whom 96,000 were returned as Hindus, and 99,000 as Animists), BHUMIJ (109,000), and Koras (22,000). Many of the lower Hindu castes consist to a great extent of aboriginal elements; such are the Bauris (99,000), Bhuiyās (37,000), Rajwārs (32,000), and Doms (19,000), and probably also the Kurmīs (241,000), the most numerous caste in the District. Agriculture supports 67 per cent. of the population, industries 11.7 per cent., and the professions 1.3 per cent.

Christian
missions.

Christians number 2,910, of whom 2,599 are natives. The German Evangelistic Lutheran Mission, which began work in 1864, maintains schools and also works among the lepers; while a mission of the Free Church of Scotland in the Gobindpur subdivision has a community of 700.

General
agricul-
tural con-
ditions.

The surface consists of a succession of rolling uplands with intervening hollows, along which the drainage runs off to join the larger streams. The soil is for the most part composed of hard, dry, ferruginous gravel, which has been furrowed into countless small channels by the discharge of surface drainage; but many of the lower levels are filled with good alluvial soil. The lower slopes of these uplands, and the swampy ground between, supply the only land on which a wet rice crop can be grown without elaborate levelling and embanking. The hill-sides, when terraced for rice cultivation, present the appearance of a series of steps varying from 1 to 5 feet in height. In some cases the beds of streams are banked up at intervals and made into long narrow rice fields.

Chief agri-
cultural
statistics
and princi-
pal crops.

The chief agricultural statistics for 1903-4 are shown in the table on the next page, in square miles.

It is estimated that 10 per cent. of the cultivated area is twice cropped. The most important staple is rice, which

covers an area of 1,428 square miles. Two principal crops are grown: the *nuān* or *aus*, which is sown broadcast as soon as possible after the first good fall of rain and reaped at the end of September; and the *haimantik* or *āman*, which is sown in a nursery about the end of May and afterwards transplanted and finally reaped from November to January. A third but less important crop, the summer rice or *gorādhān*, is sown broadcast in May on table-lands and tops of ridges, and is reaped in August. The first two crops are grown only on lands where there is a good supply of water. Other important cereals are maize, grown on 172 square miles, *maruā*, *bājra*, wheat, and barley. Green crops and pulses—including gram, *mūng*, *kalai*, *rahar*, peas, *khesāri*, beans, *kurthi*, and *masuri*—are cultivated on 245 square miles. Among oilseeds rape and mustard are grown on 52 square miles, and *tīl* on about 16 square miles. Some sugar-cane, cotton, and tobacco are also grown. Rotation of crops is practised to a very limited extent. Manure is used for all crops to which the cultivator can afford to apply it. It usually consists of cow-dung, ashes, decayed leaves and grass, and black mud mixed with decayed vegetable matter gathered from the bottoms and sides of stagnant pools and tanks.

Subdivision.	Total.	Cultivated.	Cultivable waste.	Forest.
Purūha . . .	3,344	1,485	161	11
Gobindpur . . .	803	470	51	4
Total	4,147	1,955	212	15

There is an ever-increasing demand for land; and, in spite of the unusual amount of labour required to bring fresh fields under cultivation, reclamation is steadily proceeding under the tenures known as *nayābādi* and *jalsāsan*. The proportion of uncultivated waste is still high, but it is estimated that during the decade ending 1901-2 there was an increase of 60 per cent. in the area under crops. Little advantage is taken of the provisions of the Land Improvement and Agriculturists' Loans Acts, but during the lean years 1896-8 about Rs. 86,000 was advanced under these Acts.

The local cattle are small, but a larger variety is sometimes obtained by cross-breeding with large Hazāribāgh bulls. Regular pasture grounds are rare; but sufficient rice straw is kept in stock by the ryots for fodder during the hot months, and after the break of the rains the extensive waste lands of

the District afford ample pasturage. Fairs are held annually at Chākultor, south of Purūlia, in September for a month, and at Anāra on the Purūlia-Barākar road for about twenty days in April.

Irrigation. The surface drainage is rapid and the soil dries up quickly; irrigation of some kind is thus essential for most crops. There are no canals or other artificial water-courses, but there is a very large number of tanks and *āhars*. The latter are reservoirs, often of considerable size, constructed by running a dam across a ravine or dip, thereby holding up the natural surface drainage. The fields below the dam are kept continually moist by the percolation of the water.

Forests. There are two small 'protected' forests, but no revenue is derived from them. The predominant tree is *sāl* (*Shorea robusta*). The principal minor jungle products are lac, catechu, *sabai* grass, and *tasar* silk cocoons. Lac rearing forms the occupation of a large section of the population. The best variety is produced on *kusum* trees (*Schleichera trijuga*), and inferior qualities on *ber* (*Zizyphus Jujuba*) and *palās* (*Butea frondosa*). The chief edible jungle products are the flowers of the *mahuā* (*Bassia latifolia*) and the fruits of the *ber* and *singhāra* (*Trapa bispinosa*).

Mines and minerals. The most important mineral in Mānbhūm is coal, which is mined on a large scale in the Gobindpur subdivision. The Jherriā coal-field occupies an area of about 180 square miles, and a portion of the Rāniganj-Barākar field also extends into the District. Coal had long been known to exist in Mānbhūm, but as recently as 1891 only two mines were being worked, with an output of 78,000 tons. The Jherriā field was tapped by the railway in 1894; and the output of coal from the collieries of the District rose from 129,000 tons in that year to 1,281,000 tons in 1895, nearly the whole of the increase coming from the Jherriā field. After a short period of depression in the two following years the industry has grown steadily, and in 1903 as many as 141 collieries were at work: namely, 115 in the Jherriā field and 26 in the Rāniganj field, with outputs of 2,746,000 tons and 246,000 tons, and giving employment to 28,000 and 3,000 persons respectively. The most important concerns are those of the Barākar Coal Company, Jardine Skinner & Co., the Standard Coal Company, Agabeg Brothers, MacLeod & Co., Turner Morrison & Co., the Rāniganj Coal Association, the Bengal Coal Company, and the Bengal-Nāgpur Coal Company.

Steam-power is generally used in the Rāniganj field, but

only in twenty-four collieries in the Jherriā field, where good coal is often found very near the surface and the roof in many instances is of hard stone, and the system of working by means of inclines is practicable. Shafts are never of the depths common in most collieries in England, and the mines are consequently free from the danger arising from gas; the deepest shaft in the Jherriā field is one of 320 feet belonging to the Bhāgā colliery.

Many of the labourers employed are local residents, but a large number also come from Hazāribāgh; they generally belong to the aboriginal tribes or low Hindu castes. The relations between capital and labour appear to be on the whole satisfactory, and as the demand for labour is very great, a colliery manager has every inducement to treat his miners well; they are generally paid by piece-work at rates varying from 12 annas to Rs. 1-4 per 100 cubic feet of coal raised, the wages earned usually amounting to 7 or 8 annas a day.

About three-fourths of the coal produced is purchased by large European firms who carry it by rail to Calcutta. A small quantity is used by mills and steamships there; but by far the greater portion is shipped to Bombay, Karāchi, Madras, Penang, Singapore, and other ports. About one-fourth of the output is consumed by different railways and by mills in the Upper Provinces.

A clay ironstone, constituting a large proportion of the ironstone shales, is especially rich and plentiful in the Rāniganj coal-field, where it is sometimes associated with carbonaceous matter forming a black-band iron ore. Among the gneissose and schistose rocks there are magnetic and titaniferous iron ores. Red hematite occurs in the siliceous fault breccias of the same areas, and lateritic iron ores also exist. The rocks on the southern boundary of the District constitute part of the northern edge of the auriferous tract of Chotā Nāgpur. They are traversed by innumerable gold-bearing quartz veins, from which has been derived the alluvial gold obtained in all the rivers that drain the schist area. The Pātākūm Prospecting Syndicate attempted to work the gold on an extensive scale, but failed, and the careful investigation to which the area has been subjected of late years leaves very little hope of extracting the gold at a profit. A vein of argentiferous galena occurs about a mile east of Dhādkā, in the south-east of the District. Several small soapstone quarries are worked; and rubble, quartz, *kankar*, sandstone, trap, and basalt are also quarried.

Shellac is largely manufactured, especially in the Jhalidā

Arts and
manufac-
tures.

and Balarāmpur *thānas*, and 54 factories employing 1,400 hands were at work in 1903-4. The manufacture of *tasar* silk is carried on chiefly in the Raghunāthpur *thāna*, and was formerly an important industry; but in 1903-4 the estimated out-turn was only 16,000 yards. Coarse cotton cloths are woven all over the District, and are preferred by the lower classes to the imported machine-made article on account of their superior durability. Brass and bell-metal utensils and rough brass ornaments are also manufactured in several places. Soapstone found in the Chāndil *thāna* is made into cups, images, &c., but the industry is small. An inferior quality of rope is made from *sabai* grass, which grows extensively in the Pātkūm, Bāghmundī, Barābhūm, and Heslā *parganas*. Cutlery and guns are made at Jhalidā.

Commerce.

The chief exports are coal and coke; and the chief imports are salt, rice, gram, pulses, kerosene oil, cotton twist and cotton piece-goods, molasses, sugar, and tobacco. Most of the imports come from Calcutta and Burdwan, with the exception of gram, pulses, tobacco, and molasses, which come chiefly from Bihār. The coal exported by rail in 1903-4 amounted to over 2,000,000 tons, of which nearly three-quarters was sent to Calcutta and Howrah. The principal trade centres are Purūlia, Jhalidā, Chās, Raghunāthpur, Chāndil, Chirkundā, Gobindpur, Mānbāzār, Ichāgarh, Barabāzār, Dubrā, and Nirsā. Most of the external trade is carried on by rail; bullock-carts are extensively used for local traffic. The greater part of the trade is carried on by Mārwaris and Gandhabaniks.

Railways
and roads.

The Bengal-Nāgpur Railway traverses the head-quarters subdivision from north-east to south-west. The Jherriā extension of the East Indian Railway with its numerous sidings connects the coal-fields of the Gobindpur subdivision with Asansol and Calcutta, and has been carried on to Bānkurā and Midnapore, intersecting the Bengal-Nāgpur Railway at Adrā station. Another line recently constructed links up Jherriā with Gayā. The District contains 818 miles of roads, of which 682 miles are under the control of the District board and the remainder are Provincial, 59 miles being maintained by the District board and 77 being in charge of the Public Works department. The Provincial roads, of which 119 miles are metalled, include 41 miles of the grand trunk road in the Gobindpur subdivision, 42 miles of the Purūlia-Barākar road, and 36 miles of the Purūlia-Rānchī road. Of the District board roads 363 miles are metalled, the principal being those

from Purūlia to Chaibāsa, Mānbāzār, and Bānkurā, and from Raghunāthpur to Rānīganj. The District board maintains six ferries on the more important roads.

The undulating character of the surface and the consequent ^{Famine.} rapid drainage render Mānbhūm peculiarly liable to drought, and it suffered severely during the general famines of 1866, 1874, and 1897. The distress in 1866 was felt over almost the whole District. Rice rose to the excessively high price of $3\frac{1}{2}$ seers to the rupee in the month of August, and in the affected area as many as 33,296 persons, or 6.55 per cent. of the population, died from starvation and its indirect effects. In 1874 the north and north-east of the District suffered most. In addition to a cash expenditure of 2.7 lakhs, more than 8,000 tons of grain were distributed by Government, and thus the price of rice never exceeded the rate of 12 seers to the rupee. The famine of 1897 was felt over the greater part of the District, but was most intense in the Gobindpur subdivision. The price of grain was highest in July, when rice sold at 7 seers to the rupee. The total expenditure on relief works amounted to 2.8 lakhs, and Rs. 42,000 was spent in advances for village works. The aggregate number of persons relieved on works, expressed in terms of one day, was 1,311,569, and 1,456,105 persons received gratuitous relief.

For administrative purposes the District is divided into two subdivisions, with head-quarters at PURŪLIA and GOBINDPUR. Subordinate to the Deputy-Commissioner at Purūlia is a staff of five Deputy-Magistrate-Collectors; the subdivisional officer of Gobindpur is assisted by a Sub-Deputy-Collector. District subdivisions and staff.

The chief civil court is that of the Judicial Commissioner of Chotā Nāgpur. For the disposal of civil work a Subordinate Judge and two Munsifs sit at Purūlia, and a Munsif each at Raghunāthpur and Gobindpur. The Munsif of Raghunāthpur also tries rent suits under Act X of 1859, and exercises the powers of a third-class magistrate. Deputy-Collectors try rent suits under Act X of 1859 at Purūlia and Gobindpur. The Deputy-Commissioner exercises special powers under section 34 of the Criminal Procedure Code. As Additional Sessions Judge of Chotā Nāgpur, the Sessions Judge of Bānkurā tries all sessions cases and criminal appeals arising within Mānbhūm and Singbhūm; for the disposal of sessions cases he sits at Purūlia, and for the hearing of appeals sometimes at Purūlia and sometimes at Bānkurā. Of late years Mānbhūm has been notorious for the number of dacoits it shelters; in 1905 more dacoities were committed than in any Civil and criminal justice.

other Bengal District. These crimes are confined mainly to the coal-fields, and are the work of up-country criminals who congregate there.

Land
revenue.

At the time of the Permanent Settlement the smaller chiefs in Mānbhūm were considered to be independent landholders and were admitted to separate settlements. Succession to land follows the custom of primogeniture ; there has thus been no subdivision of property, and in 1903-4 there were in all only 29 revenue-paying estates with a current demand of Rs. 84,000 ; of these all but two are permanently settled, the largest being Pānchet with a demand of Rs. 58,000. The Permanent Settlement was extended to the District at a time when it was unprepared for such a measure, and the assessment is therefore disproportionately light, amounting to only R. 0-1-1 per cultivated acre. Special tenures are the *ghātwāli* and other service tenures, maintenance grants to the younger members of a *zamīndār's* family, and *mānki* and *murūri* tenures, a survival of the aboriginal village system (see KOLHĀN). The *ghātwāls* hold a certain quantity of land on a quit-rent, as a remuneration for police duties which they are required to perform on behalf of Government. Other service tenures are those of the *jāgīrdārs* in Pānchet, who retain one-third or more of the produce of the villages included in their holdings ; *goraiti* tenures, or grants made to the *gorait* or village messenger ; and *lāyāli* grants made to *lāyas* or priests of the aboriginal deities. Petty service, or *chākrān*, grants with no specific name are often made to barbers, potters, washermen, smiths, and others performing menial services for their landlords ; as a rule, they are given free of rent.

Maintenance tenures granted for the support of the younger members of a Rājā's or *zamīndār's* family are of two kinds, *khorposh* and *hikimāli*. The latter, which are confined to the Barābhūm and Mānbhūm *parganas*, are grants of land assigned for the maintenance of the *hikim* or second brother and the *kunwār* or third brother of the *zamīndār* for the time being. On the death of the *zamīndār*, the brothers of his successor take up the lands attached to the office of *hikim* or *kunwār*, and perform the services in consideration of which those lands are held. A *hikimāli* tenure is thus dependent on the life of the *zamīndār* and not on that of the tenure-holder. But each *zamīndār*, when he succeeds to the estate, is bound to make suitable provision in the form of ordinary *khorposh* grants for the *hikims* who have vacated the *hikimāli* grants derived from their relationship to his predecessor. Such

maintenance grants are held during the life of the grantees, and are liable to lapse at their death to the parent estate.

The incidence of rental for the whole District is estimated at Rs. 1-12-3 per cultivated acre; but owing to the fact that land is seldom assessed on measurement, any statement of rates is only an approximation. In Barābhūm the generally accepted rates of rent payable by the cultivator to his landlord are Rs. 4-12-9 per acre of *bahāl* or low-lying rice-land; Rs. 3-9-7 per acre of *kānālī* or moderately high rice-land; Rs. 2-6-5 per acre of *baid* or high land; and Rs. 1-3-2 per acre of *gorā* or the worst class of land. A substantial cultivating ryot pays about Rs. 2-2 for his *bāstu* or homestead land, a non-cultivating ryot Rs. 1-1, and a ryot of the poorer class about 8½ annas. Similar rates prevail in the other *parganas* in the south of the District, but in Pānchet and in other estates in the north they are from 50 to 100 per cent. higher.

The following table shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees:—

	1880-1	1890-1	1900-1.	1903-4.
Land revenue .	83	82	80	84
Total revenue .	3,07	4,25	6,97	8,91

Outside the municipalities of PURŪLIA, JHALIDĀ, and RA-Local and GHUNĀTHPUR, local affairs are managed by the District board, municipal with a subordinate local board at Gobindpur. In 1903-4 its govern- income was Rs. 1,42,000, half of which was derived from rates; and the expenditure was Rs. 1,19,000, including Rs. 74,000 ment. spent on public works and Rs. 32,000 on education.

The District contains 24 police stations or *thānas* and Police and 3 outposts. In 1903 the force subordinate to the District jails. Superintendent consisted of 3 inspectors, 36 sub-inspectors, 24 head constables, and 297 constables. In addition, there was a rural police force of 4,360 *chaukidārs*, of whom 1,720 held service tenures, and 1,972 *ghātswāls* of different grades. The District jail at Purūlia has accommodation for 276 prisoners, and a subsidiary jail at Gobindpur for 32.

The District is very backward in respect of education, and Education. in 1901 only 4.0 per cent. of the population (7.7 males and 0.3 females) could read and write. The number of pupils under instruction increased from 10,563 in 1883 to 15,578 in 1892-3 and to 20,535 in 1900-1. In 1903-4, 24,751 boys and 2,058 girls were at school, being respectively 25.2 and

2·1 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 799: namely, 26 secondary, 761 primary, and 12 special schools. The expenditure on education was Rs. 1,28,000, of which Rs. 14,000 was met from Provincial funds, Rs. 32,000 from District funds, Rs. 600 from municipal funds, and Rs. 51,000 from fees. The chief educational institution is the Purūlia Government school.

Medical. In 1903 the District contained 8 dispensaries, of which 5 had accommodation for 64 in-patients. The cases of 41,000 out-patients and 641 in-patients were treated during the year, and 1,623 operations were performed. The expenditure was Rs. 12,600, the sources of income being Rs. 800 from Government, Rs. 2,000 from Local and Rs. 6,100 from municipal funds, and Rs. 5,300 from subscriptions. A leper asylum 2 miles south-west of Purūlia is managed by the German Evangelical Lutheran Mission. Its grounds cover about 400 acres and it has 509 inmates, including 83 children. Untainted children of leprous parents are received in a special home at some distance from the asylum.

Vaccination. Vaccination is compulsory only in municipal areas. In 1903-4 the number of persons successfully vaccinated was 39,000, or 30·7 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvii (1877); F. B. Bradley-Birt, *Chotā Nāgpur* (1903).]

Purūlia Subdivision.—Head-quarters subdivision of Mān-bhūm District, Bengal, lying between 22° 43' and 23° 44' N. and 85° 49' and 86° 54' E., with an area of 3,344 square miles. The subdivision occupies the declivity between the Chotā Nāgpur plateau and Western Bengal. To the east it merges in the alluvial plains, but to the west and south the country is more broken. This part of the subdivision contains the Bāghmundi and Dalmā ranges of hills, the latter of which separates it from Singhbhūm. The population in 1901 was 1,024,242, compared with 971,894 in 1891, the density being 306 persons per square mile. It contains three towns, PURŪLIA (population, 17,291), the head-quarters, JHALIDĀ (4,877), and RAGHUNĀTHPUR (4,171); and 4,273 villages.

Gobindpur Subdivision.—Northern subdivision of Mān-bhūm District, Bengal, lying between 23° 38' and 24° 4' N. and 86° 7' and 86° 50' E., with an area of 803 square miles. The subdivision consists of a triangular strip of country between the Dāmodar and Barakar rivers; to the west the land rises to the Chotā Nāgpur plateau, but to the north and east

the country is open and consists of a series of rolling downs, with a few isolated hills. The population in 1901 was 277,122, compared with 221,434 in 1891, the density being 345 persons per square mile. It contains 1,248 villages, of which GOBINDPUR is the head-quarters; but no town. The Jherriā coal-field lies within the subdivision, and the great growth of the population during the last decade is due to the rapid development of the mining industry.

Borām.—Village in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $23^{\circ} 22' N.$ and $86^{\circ} 8' E.$ It is noteworthy on account of the Jain remains in the neighbourhood, on the right bank of the Kāsai river. Amid heaps of débris and ruins stand three fine brick temples. The tower of the largest rises from a base of 26 feet square to a height of (at present) about 60 feet; the upper portion has fallen, but the proportions in other temples of the same type suggest that the original building must have been about one-third higher than the present ruins. The chamber occupies only 9 square feet; the images have been removed. The bricks of which these temples are made are beautifully fashioned, and appear to have been finished by grinding. In this respect, and in their style of ornament and workmanship, these temples resemble the great Buddhist temple of Buddh Gayā in Bihār.

[*Archæological Survey Report*, vol. viii, pp. 184-6.]

Buddhpur.—Village in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $22^{\circ} 58' N.$ and $86^{\circ} 42' E.$, on the Kāsai river. Population (1901), 160. Extending for two miles along the bank are several ruins of what are thought to have been Jain temples. A number of carved slabs of stone are scattered about; and an extensive collection of octagonal headstones is believed to mark the graves of the early settlers. About 4 miles to the north, at Pākhirā, is a group of temples with a colossal figure, about 9 feet high, supposed to represent one of the Tīrthankaras, or hierarchs of the Jains.

Charrā.—Village in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $23^{\circ} 23' N.$ and $86^{\circ} 25' E.$, 4 miles north-east of Purūlia. Population (1901), 1,532. It contains some very old stone temples, called *deuls* or *debālayas*. There were originally seven temples, but five have fallen. Some of them were Jain or Buddhist, and numerous votive *chartyas* with mutilated figures of either of Buddha or one of the Jain hierarchs lie in the village; but the greater number of the remains of sculptures lying about are Brāhmanical. According

to local tradition, these and some large tanks in the vicinity were constructed by Sārāks.

Dalma.—The highest hill in Mānbhūm District, Bengal, situated in the head-quarters subdivision in $22^{\circ} 53' N.$ and $86^{\circ} 14' E.$, rising to a height of 3,407 feet above sea-level. It has been described as the rival of Parasnāth; but it lacks the bold precipices and commanding peaks of that hill, and is merely a long rolling ridge rising gradually to its highest point. Its slopes are covered with dense forest, but are accessible to beasts of burden. The chief aboriginal tribes living on the hill are the Khariās and Pahāriās.

Dalmī.—Site of ruins in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $23^{\circ} 4' N.$ and $86^{\circ} 2' E.$, on the Subarnarekhā. The ruins include the remains of a fort and of many brick-built temples. They are representative examples of post-Muhammadan brick temples, but many of the bricks and of the carved stone images formerly found here have been carried away by the villagers. An inscribed figure of Aditya is in fine order, and there is also a small figure of a ten-armed Devī.

Gobindpur Village.—Head-quarters of the subdivision of the same name, Mānbhūm District, Bengal, situated in $23^{\circ} 50' N.$ and $86^{\circ} 32' E.$ Population (1901), 1,293. Gobindpur contains the usual subdivisional offices, and a sub-jail with accommodation for 32 prisoners.

Jhalidā.—Town in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $23^{\circ} 22' N.$ and $85^{\circ} 59' E.$ Population (1901), 4,877. Jhalidā was constituted a municipality in 1888. The income and expenditure during the decade ending 1901-2 averaged Rs. 3,000. In 1903-4 the income was Rs. 3,700, mainly from a tax on persons (or property tax); and the expenditure was Rs. 3,400. Jhalidā is a centre of the lac and cutlery industries.

Palmā.—Deserted Jain settlement, situated within a few miles of Purūlia and near the Kāsai river in the head-quarters subdivision of Mānbhūm District, Bengal. The principal temple stands on a mound covered with stone and brick, the débris of buildings. There are several sculptures of nude male figures standing on pedestals and under canopies, with Egyptian head-dresses, the arms hanging down straight by their sides, the hands turned in and touching the knees. There can be no doubt that these images represent the Tirthankaras, or hierarchs of the Jains.

Pānchet.—Hill in the head-quarters subdivision of Mān-

bhūm District, Bengal, situated in $23^{\circ} 37' N.$ and $86^{\circ} 47' E.$, half-way between Raghunāthpur and the junction of the Barākar and Dāmodar rivers. It is 3 miles long, stretching from north to south in a long rounded ridge, and has a height of 1,600 feet above sea-level. A fort containing the ruins of many temples, tanks, &c., was once the main seat of the Rājā of Pānchet. A large gathering takes place annually at a temple on the side of the hill.

Purūlia Town.—Head-quarters of Mānbhūm District, Bengal, situated in $23^{\circ} 20' N.$ and $86^{\circ} 22' E.$, on the Sini-Asansol branch of the Bengal-Nāgpur Railway. Population (1901), 17,291. Purūlia was constituted a municipality in 1876. The income and expenditure during the decade ending 1903-4 each averaged Rs. 22,000. In 1903-4 the income was Rs. 27,000, mainly derived from a tax on persons (or property tax), a conservancy rate, and receipts from markets; and the expenditure was Rs. 21,000. The town contains the usual public offices, and a large leper asylum is situated in the neighbourhood. The Inspector of Schools for the Chotā Nāgpur Division is stationed here. The jail has accommodation for 276 prisoners, who are employed mainly on oil-pressing, aloe-pounding, weaving, cane-work, and gardening.

Raghunāthpur.—Town in the head-quarters subdivision of Mānbhūm District, Bengal, situated in $23^{\circ} 31' N$ and $86^{\circ} 40' E.$ Population (1901), 4,171. Raghunāthpur was constituted a municipality in 1888. The income during the decade ending 1903-4 averaged Rs. 2,900, and the expenditure Rs. 2,450. In 1903-4 the income and expenditure were each Rs. 3,000, the chief source of income being a tax on persons (or property tax). Raghunāthpur is a centre of the *tasar* silk industry.

Singhbhūm.—District in the south-east of the Chotā Nāg-
pur Division of Bengal, lying between $21^{\circ} 58'$ and $22^{\circ} 54' N.$ and $85^{\circ} 0'$ and $86^{\circ} 54' E.$, with an area of 3,891¹ square miles. It is bounded on the north by the Districts of Rānchī and Mānbhūm; on the east by Midnapore; on the south by the Mayūrbhanj, Keonjhar, and Bonai States; and on the west by Rānchī and the Gāngpur State. The boundaries follow the crests of the unnamed hill-ranges which wall in the District on every side, save for short distances where they are marked by the Subarnarekhā and Baitarani rivers.

Singhbhūm ('the land of the Singh family' of PORĀHĀT)

¹ This figure, which differs from that shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

comprises the Government estate of the KOLHĀN in the south-east, the revenue-paying estate of Dhalbhūm (Dhal being the *zamīndār's* patronymic) in the east, and the revenue-free estate of Porāhāt in the west, while the States of SARAIKELĀ and KHARSĀWĀN lie in the north, wedged in between Porāhāt and Dhalbhūm. The District forms part of the southern fringe of the Chotā Nāgpur plateau; and the western portion is very hilly, especially in the north, where the highest points have an altitude of more than 2,500 feet, and in Saranda *pīr* in the south-west, where the mountains culminate in a grand mass which rises to a height of 3,500 feet. Outlying ranges stretch thence in a north-easterly direction to a point about 7 miles north-west of Chaibāsa. Smaller ranges are frequently met with, chiefly along the northern marches of Saraikelā and Kharsāwān and in the south of Dhalbhūm on the confines of the Mayūrbhanj State; but in general the eastern and east-central parts of the District, although broken and undulating, are comparatively open. The Singhbhūm hills present an outline of sharp-backed ridges and conical peaks, which are covered with forest wherever it is protected by the Forest department; elsewhere the trees have been ruthlessly cut, and the hill-sides are rapidly becoming bare and rocky. Among the mountains the scenery is often beautiful. The mountains west of Chaibāsa form the watershed which drains north-eastwards into the SUBARNAREKHĀ and south and west into the BRĀHMANĪ river. The Subarnarekhā, which flows through the whole length of Dhalbhūm, receives on its right bank the Sanjai, which drains Porāhāt, Kharsāwān, and Saraikelā. The Kodkai rises in Mayūrbhanj State, and with its affluent the Raro, on whose bank Chaibāsa town is situated, drains the north of the Kolhān, and after passing through Saraikelā, joins its waters with the Sanjai. The Kāro and the Koel rivers drain the west of the District, and flow westwards into the Brāhmanī river, which they join in the Gāngpur State. The beds of all the rivers are strewn with boulders, which impede navigation, and the banks are generally steep and covered with scrub jungle; but alluvial flats are deposited in some of the reaches, where vegetables and tobacco are grown. The Phuljhur river bursts out of Rānchī District into Singhbhūm in a cascade which forms a pool supposed to be unfathomable, and is the subject of various legends; similar pools in the Baitaranī river on the borders of Keonjhar are held sacred, and at one about 2 miles from Jaintgarh Brāhmans have established a shrine, where Hindu pilgrims bathe.

The District is occupied almost entirely by the Archaean Geology. group, a vast series of highly altered rocks, consisting of quartzites, quartzitic sandstones, slates of various kinds, sometimes shaly, mica-schists, metamorphic limestones, ribboned ferruginous jaspers, talcose and chloritic schists, the last passing into potstones, basic volcanic lavas, and ash-beds mostly altered to hornblendic schists, greenstones, and epidiorites. East and south of Chaibāsa there is a large outcrop of a massive granitic gneiss, resembling that of Bundelkhand, and traversed in the same way by huge dikes of basic rocks. Laterite is found in many places. In the east it largely covers the older rocks and is in its turn concealed by alluvium¹.

Singhbhūm lies within the zone of deciduous-leaved forest Botany. and within the Central India *sāl* tract, with a temperature attaining 115° in the shade, and mountains rising to 3,000 feet with scorched southern slopes and deep damp valleys: its flora contains representatives of dry hot countries, with plants characteristic of the moist tracts of Assam. On rocks, often too hot to be touched with the hand, are found *Euphorbia Nivulia*, *Sarcostemma*, *Sterculia urens*, *Boswellia serrata*, and the yellow cotton-tree (*Cochlospermum Gossypium*), while the ordinary mixed forest of dry slopes is composed of *Anogeissus latifolia*, *Ougeinia*, *Odina*, *Cleistanthus collinus*, *Zizyphus xylopyrus*, *Buchanania latifolia*, and species of *Terminalia* and *Bauhinia*. The *sāl* varies from a scrubby bush to a tree 120 feet high, and is often associated with *Odina*, the *mahuā* (*Bassia latifolia*), *Diospyros*, *Symplocos racemosa*, the gum kino-tree (*Pterocarpus Marsupium*), *Eugenia Jambolana*, and especially *Wendlandia tinctoria*. Its common associates, *Careya arborea* and *Dillenia pentagyna*, are here confined to the valleys; but *Dillenia aurea*, a tree of the Eastern peninsula and sub-Himālayas, is curiously common in places. The flora of the valley includes *Garcinia Cowa*, *Litsaea nitida* (Assamese), *Amoora Rohituka*, *Saraca indica*, *Gnetum scandens*, *Musa sapientum* and *M. ornata*, *Lysimachia peduncularis* (Burmese), and others less interesting. The best represented woody orders are the *Leguminosae*, *Rubiaceae* (including six species of *Gardenia* and *Randia*), *Euphorbiaceae*, and *Urticaceae* (mostly figs). Of other orders, the grasses number between one and two hundred species, including the *sabai* grass (*Ischaemum angustifolium*) and spear-grass (*Andropogon contortus*), which are most abundant. The *Cyperaceae* number

¹ *Memoirs, Geological Survey of India*, vol. xviii, pt. ii; and *Records, Geological Survey*, vol. iii, pt. iv, and vol. xxxi, pt. ii.

about 50 species, the *Compositae* 50, and the *Acanthaceae* about 11 under-shrubs and 25 herbs. The principal bamboo is *Dendrocalamus strictus*; and the other most useful indigenous plants are the *mahuā* (*Bassia latifolia*) and *Dioscorea* for food, *Bauhinia Vahlii* for various purposes, *āsan* (*Terminalia tomentosa*) for the rearing of silkworms, *Terminalia Chebula* for myrabolams, *kusum* (*Schleichera tryuga*) for lac and oil, and *sabai* grass.

Fauna.

Wild elephants, bison, tigers, leopards, bears, *sāmbar*, spotted deer, barking-deer, four-horned antelope, wild hog, hyenas, and wild dogs are found; but they are becoming scarce, owing to the hunting proclivities of the aborigines, and, with the exception of bears and some of the smaller animals, they are now almost entirely restricted to the 'reserved' forests. Poisonous snakes are numerous. Many men and cattle are killed by wild animals, and upwards of Rs. 700 is distributed annually in rewards for killing dangerous beasts.

Temperature and rainfall.

During the hot months of April, May, and June westerly winds from Central India cause high temperature with very low humidity. The mean temperature increases from 81° in March to 90° in April and 93° in May; the mean maximum from 95° in March to 105° in May, and the mean minimum from 67° to 80°. During these months humidity is not so low in this District as elsewhere in Chotā Nāgpur, though it falls to 60 per cent. in March and 56 per cent. in April. In the cold season the mean temperature is 67° and the mean minimum 53°. The annual rainfall averages 53 inches, of which 9.2 inches fall in June, 13.4 in July, 12.4 in August, and 7.9 in September. The rainfall is heaviest in the west and south-west; but, owing to the mountainous character of the country, it varies much in different localities, and one part of the District may often have good rain when another is suffering from drought.

History.

Thanks mainly to its isolated position, Singhbhūm was never invaded by the Mughals or the Marāthās. The northern part was conquered successively by Bhuiyā and Rājput chiefs, but in the south the Hos or Larkā ('fighting') Kols successfully maintained their independence against all comers. The Singh family of Porāhāt, whose head was formerly known as the Rājā of Singhbhūm, are Rāthor Rājputs of the Solar race; and it is said that their ancestors were three brothers in the body-guard of Akbar's general, Mān Singh, who took the part of the Bhuiyās against the Hos and ended by conquering the country for themselves. At one time the Rājā of Singhbhūm

owned also the country now included in the States of Saraikelā and Kharsāwān, and claimed an unacknowledged suzerainty over the Kolhān; but SARAIKELĀ and KHARSĀWĀN, with the dependent maintenance grants of Dugnī and Bānkshāhi, were assigned to junior members of the family, and in time the chief of Saraikelā became a dangerous rival of the head of the clan.

British relations with the Rājā of Singhbhūm date from 1767, when he made overtures to the Resident at Midnapore asking for protection; but it was not until 1820 that he acknowledged himself a feudatory of the British Government, and agreed to pay a small tribute. He and the other chiefs of his family then pressed on the Political Agent, Major Roughsedge, their claims to supremacy in the Kolhān, asserting that the Hos were their rebellious subjects and urging on Government to force them to return to their allegiance. The Hos denied that they were subject to the chiefs, who were fain to admit that for more than fifty years they had been unable to exercise any control over them; they had made various attempts to subjugate them, but without success, and the Hos had retaliated fiercely, committing great ravages and depopulating entire villages. Major Roughsedge, however, yielding to the Rājās' representations, entered the Kolhān with the avowed object of compelling the Hos to submit to the Rājās who claimed their allegiance. He was allowed to advance unmolested into the heart of their territory, but while encamped at Chaibāsa an attack was made within sight of the camp by a body of Hos who killed one man and wounded several others. They then moved away towards the hills, but their retreat was cut off by Lieutenant Maitland, who dispersed them with great loss. The whole of the northern Hos then entered into engagements to pay tribute to the Rājā of Singhbhūm; but on leaving the country Major Roughsedge had to encounter the still fiercer Hos of the south, and after fighting every inch of his way out of Singhbhūm, he left them unsubdued. His departure was immediately followed by a war between the Hos who had submitted and those who had not, and a body of 100 Hindustāni irregulars sent to the assistance of the former was driven out by the latter. In 1821 a large force was employed to reduce the Hos; and after a month's hostilities, the leaders surrendered and entered into agreements to pay tribute to the Singhbhūm chiefs, to keep the road open and safe, and to give up offenders; they also promised that 'if they were oppressed by any of the chiefs,

they would not resort to arms, but would complain to the officer commanding the troops on the frontier, or to some other competent authority.'

After a year or two of peace, however, the Hos again became restive, and gradually extended the circle of their depredations. They joined the Nāgpur Kols or Mundās in the rebellion of 1831-2; and Sir Thomas Wilkinson, who was then appointed Agent to the Governor-General for the newly formed non-regulation province of the South-Western Frontier, at once recognized the necessity of a thorough subjugation of the Hos, and at the same time the impolicy and futility of forcing them to submit to the chiefs. He proposed an occupation of Singhbhūm by an adequate force, and suggested that, when the people were thoroughly subdued, they should be placed under the direct management of a British officer, to be stationed at Chaibāsa. These views were accepted; a force under Colonel Richards entered Singhbhūm in November, 1836, and within three months all the refractory headmen had submitted. Twenty-three Ho *pīrs* or *parganas* were then detached from the States of Porāhāt, Saraikelā, and Kharsāwān, and these, with four *pīrs* taken from Mayūrbhanj, were brought under direct management under the name of the KOLHĀN; and a Principal Assistant to the Governor-General's Agent was placed in charge of the new District, his title being changed to Deputy-Commissioner after the passing of Act XX of 1854. There was no further disturbance until 1857, when the Porāhāt Rājā, owing largely to an unfortunate misunderstanding, rose in rebellion, and a considerable section of the Hos supported him. A tedious and difficult campaign ensued, the rebels taking refuge in the mountains whenever they were driven from the plains; eventually, however, they surrendered (in 1859), and the capture of the Rājā put an end to the disturbances.

Since that year the Hos have given no trouble. Under the judicious management of a succession of British officers, these savages have been gradually tamed, softened, and civilized, rather than subjugated. The settlement of outsiders who might harass them is not allowed; the management of the estate is carried on through their own headmen; roads have been made; new sources of industrial wealth have been opened out, new crops requiring more careful cultivation introduced, new wants created and supplied; even a desire for education has been engendered, and educated Hos are to be found among the clerks of the Chaibāsa courts. The deposed

Rājā of Porāhāt died in exile at Benares in 1890; and the estate, shorn of a number of villages which were given to various persons who had assisted the British in the Mutiny, was restored in 1895 as a revenue-free estate to his son Kumār Narpat Singh, who has since received the title of Rājā. The present Porāhāt estate contains the rent-free tenures of Kerā and Anandpur and the rent-paying tenures of Bāndgaon and Chainpur.

Dhalbhūm, which has an area of 1,188 square miles, was originally settled with an ancestor of the present *samīndār*, because he was the only person vigorous enough to keep in check the robbers and criminals who infested the estate. It was originally part of Midnapore; and when the District of the Jungle Mahāls was broken up by Regulation XIII of 1833, it was included, with the majority of the estates belonging to it, in the newly formed District of Mānbhūm. It was transferred to Singhbhūm in 1846, but in 1876 some 45 outlying villages were again made over to Midnapore.

There are no archaeological remains of special interest; but Archaeology. there still exist in the south and east of the Kolhān proper, in the shape of tanks and architectural remains, traces of a people more civilized than the Hos of the present day. The tanks are said to have been made by the Sārāks, who were Jains, and of whom better-known remains still exist in Mānbhūm District. A fine tank at Benisāgar is surrounded by the ruins of what must have been a large town.

The enumerated population rose from 318,180 in 1872 to The 453,775 in 1881, to 545,488 in 1891, and to 613,579 in 1901. people. The increase is due in part to the inaccuracy of the earlier censuses, but a great deal of it is real; the climate is healthy and the inhabitants are prolific, and the country has been developed by the opening of the Bengal-Nāgpur Railway. The recorded growth would have been much greater but for the large amount of emigration which takes place, especially from the Kolhān to the tea Districts of Assam and Jalpaiguri, as well as to the Orissa States. In 1901 the density was 158 persons per square mile, the Chaibāsa and Ghātsīla *thānas* having 191 and 190 respectively per square mile, while Manoharpur in the west, where there are extensive forest Reserves, had only 49. CHAIBĀSA, the headquarters, is the only town; the remainder of the population is in 3,150 villages, of which 2,973 have less than 500 inhabitants. Females are 29 per 1,000 in excess of males, and this disproportion appears to be increasing. The Hos marry very late in life, owing to the

excessive bride-price which is customary. The population is polyglot. Of every 100 persons, 38 speak Ho, 18 Bengali, and 16 Oriyā; Santālī and Mundārī are also widely spoken. Of the inhabitants, 336,088 persons (55 per cent.) are Animists, and 265,144 (43 per cent.) Hindus; one per cent. are Christians and nearly one per cent. Musalmāns.

Castes and occupations.

The Hos (233,000) constitute 38 per cent. of the population, and with their congeners the Bhumij (47,000) and Mundās (25,000) account for nearly half of it. Santāls number 77,000 and Ahirs 53,000, while the functional castes most strongly represented are Tāntis or weavers (24,000) and Kāmārs or blacksmiths (11,000). Bhuiyās number 15,000 and Gonds 6,000. Of the total, 77 per cent. are dependent on agriculture and 8 per cent. on industry.

Christian missions.

The German Evangelical Lutheran Mission, the Society for the Propagation of the Gospel, and the Roman Catholic Mission are making considerable progress; their work is largely educational, but the number of Christians has more than doubled in the last twenty years. In 1901 it was 6,961, of whom 6,618 were native Christians.

General agricultural conditions.

The country may be divided into three tracts: first the comparatively level plains, then hills alternating with open valleys, and lastly the steep forest-clad mountains. In the last the cultivation was formerly more or less nomadic, the clearances being abandoned after a single crop had been harvested from the virgin soil; but this wasteful system is discouraged, and extensive areas have been formed into forest Reserves. The plains are embanked for rice cultivation, while in the intermediate tract the valleys are carefully levelled and grow rice, and the uplands or *gorā* are roughly cultivated with millets, oilseeds, and occasionally rice. The best lands are those at the bottom of the valleys which are swampy, and either naturally or artificially irrigated. These are called *berā* lands and yield a rich crop of winter rice, occasionally followed by linseed, pulses, or barley. The higher embanked lands, known as *bādi*, grow early rice. The best uplands grow an annual crop, but inferior lands are fit for cultivation only once in four or five years.

Chief agricultural statistics and principal crops.

In 1903-4 the cultivated area was estimated at 1,280 square miles; 932 square miles were cultivable waste, and 1,240 square miles were Government forests. Rice is the principal crop, occupying nearly three-fourths of the cultivated area; rather more than half of it is winter rice. Oilseeds, principally rape and mustard and *sarghā*, account for 8 per cent. and

maize for 5 per cent. of the cultivated area, while 20 per cent. is covered by pulses, 2 per cent. by *maruā*, and one per cent. each by millets and cotton.

Cultivation is extending rapidly, especially near the railway, but the system of tillage is very primitive, and shows no sign of improvement. Very little advantage is taken of the Loans Acts. Improvements in agricultural practice.

Though pasturage is ample, the cattle are poor, and the Cattle. Hos take no interest in improving the breed.

The ordinary method of irrigation is to throw an embankment across the line of drainage, thereby holding up the water, which is used for watering the crops at a lower level by means of artificial channels and percolation. In the Kolhān Government estate there are 1,000 reservoirs of this kind, a fourth of which have been constructed by Government; and it is estimated that in the District as a whole a tenth of the cultivated area is irrigated in this way. Irrigation.

More than half the District is still more or less under forest. Forests. In the Kolhān 529 square miles and in Porāhāt 196 square miles have been 'reserved' under the Forest Act; the Reserves in the latter tract are managed by the Forest department for the proprietor's benefit. Besides this, 212 square miles of 'protected' forest exist in the Kolhān estate and similar forests in Porāhāt, though these have not yet been defined. The Dhalbhūm forests, which are also fairly extensive, are managed by the proprietor without the intervention of the Forest department. The principal tree is the *sāl*, which is very valuable owing to the hardness of its timber and the size of the beams which the larger specimens yield. The chief minor products are lac, beeswax, *chob* (rope of twisted bark), myrabolams, and *sabai* grass, which is used for paper manufacture and also, locally, as a fibre. The total receipts of the Forest department in 1903-4 were Rs. 84,000, and the expenditure was Rs. 57,000. The expenditure was swelled by the cost of working-plans and of the roads which are being constructed in order to facilitate the extraction of timber. More than a third of the income is derived from the sale of *sabai* grass.

The rocks of Singhbhūm contain a number of auriferous Minerals. quartz veins, by the disintegration of which is produced alluvial gold, found in the beds of some of the streams. Of late years the District has been repeatedly examined by experts, but the proportion of gold in the numerous reefs examined and in the alluvium was found to be too low for profitable working,

Copper ores exist in many places from the confines of Rānchī to those of Midnapore. The principal form is copper glance, which is often altered to red copper oxide, and this in turn to malachite and native copper. In ancient times these ores were extensively worked, but modern attempts to resume their extraction have hitherto proved unsuccessful. Iron ore is frequently found on the surface, usually on hill-slopes, and is worked in places. Limestone occurs in the form of the nodular accretions called *kankar*, and is used not only for local purposes but is also collected and burnt for export to places along the railway.

**Manufac-
tures.** A little coarse cotton cloth is woven, and soapstone bowls and plates are made.

Commerce. The chief exports are *sāl*, paddy and rice, pulses, oilseeds, stick-lac, iron, *tasar* silk cocoons, hides, and *sabai* grass; and the chief imports are salt, cotton yarn, piece-goods, tobacco, brass utensils, sugar, kerosene oil, coal and coke. Since the opening of the railway trade has considerably increased, and large quantities of timber are now exported from the forests of the District and of the adjoining Native States.

**Railways
and roads.** The Bengal-Nāgpur Railway traverses the District from east to west, and is connected with the East Indian Railway by the Sini-Asansol branch. The roads from Chaibāsa to Chakra dharpur and from Chakradharpur towards Rānchī, about 50 miles, are maintained from Provincial funds; about 437 miles of road are maintained by the road-cess committee, and 127 miles of village tracks from the funds of the Kolhān Government estate.

Famine. The District has never been very seriously affected by famine; there was, however, general distress in 1866, when relief was given, and in 1900 the pinch of scarcity was again felt. At all seasons, and especially in years of deficient crops, the aboriginal inhabitants rely greatly on the numerous edible fruits and roots to be found in the forests.

**Adminis-
tration.** There are no subdivisions. The District is administered by a Deputy-Commissioner, stationed at Chaibāsa, who is assisted by three Deputy-Magistrate-Collectors. A Deputy-Conservator of forests is also stationed at Chaibāsa.

**Civil and
criminal
justice.** The Judicial Commissioner of Chotā Nāgpur is District Judge for Singhbhūm. The Deputy-Commissioner has the powers of a Subordinate Judge, but the Sub-Judge of Mānbhūm exercises concurrent jurisdiction, and all contested cases are transferred to his file. A Deputy-Collector exercises the powers of a Munsif, and a Munsif from Mānbhūm visits the

District to dispose of civil work from Dhalbhūm, where alone the ordinary Code of Civil Procedure is in force. Criminal appeals from magistrates of the first class and sessions cases are heard by an Assistant Sessions Judge, whose headquarters are at Bānkurā. The Deputy-Commissioner exercises powers under section 34 of the Criminal Procedure Code; in his political capacity he hears appeals from the orders of the chiefs of Sarākelā and Kharsāwān, and he is also an Additional Sessions Judge for those States. Singhbhūm is now the most criminal District in Chotā Nāgpur as regards the number of crimes committed. They are rarely of a heinous character, but thefts and cattle-stealing are very common.

Dhalbhūm was permanently settled in 1800 for Rs. 4,267 Land per annum, plus a police contribution of Rs. 498. Porāhāt is ^{revenue.} a revenue-free estate, but pays Rs. 2,100 as a police contribution. This estate, including its dependencies of Anandpur, Kerā, Bāndgaon, and Chainpur, has recently been surveyed and settled. The average rate of rent fixed at this settlement was about $8\frac{1}{2}$ annas per acre; in some parts it exceeded a rupee, but the general rate was brought down by the low rents levied in the wilder parts of the estate. The Kolhān Government estate was first settled in 1837 at a rate of 8 annas for every plough, and the total assessment amounted to Rs. 8,000. In 1853 this rate was doubled. In 1867 the estate was resettled after measurement for a term of thirty years; only embanked rice land was assessed, at a rate of 12 annas per acre, and the total land revenue demand was fixed at Rs. 65,000. The last settlement was made in 1898. Uplands were assessed, for the first time, at a nominal rate of 2 annas per acre, and outsiders were made to pay double rates; but in other respects no change was made in the rate of assessment. The extension of cultivation, however, had been so great that the gross land revenue demand was raised to Rs. 1,77,000, of which Rs. 49,000 is refunded as commission to the *mundās* or village headmen and the *mānkhīs* or heads of groups of villages. The average area of land held by a ryot is $4\frac{1}{2}$ acres, and, including the uplands (*gorā*), the average assessment per cultivated acre is $8\frac{1}{2}$ annas.

The table on the next page shows the collections of land revenue and total revenue (principal heads only), in thousands of rupees.

Outside the municipality of CHAIBĀSA, local affairs are Local and managed by the road-cess committee. This expends Rs. 18,000, municipal

govern-
ment.

mainly on roads; its income is derived from a Government grant of Rs. 10,000 and from cesses.

	1880-1.	1890-1	1900-1.	1903-4
Land revenue .	68	70	1,42	1,41
Total revenue .	95	1,53	2,89	2,98

Police and
jails.

The District contains 5 police stations or *thānas* and 3 out-posts. The force under the control of the District Superintendent consists of an inspector, 12 sub-inspectors, 15 head constables, and 155 constables. There is also a rural police of 1,323 men, of whom about half are regular *chaukidārs* appointed under Bengal Act V of 1887, and the rest (all in Dhalbhūm) are *ghātwāls* remunerated by service lands. In the Kolhān there is no regular police; but the *mānkis* and *mundās* exercise police authority and report to a special inspector, who himself investigates important cases. The District jail at Chaibāsa has accommodation for 230 prisoners.

Education.

Education is very backward, and in 1901 only 2.5 per cent. of the population (4.8 males and 0.3 females) could read and write. The number of pupils under instruction increased from about 8,500 in 1882-3 to 15,655 in 1892-3. The number declined to 13,469 in 1900-1; but it rose again in 1903-4, when 15,165 boys and 1,171 girls were at school, being respectively 33.4 and 2.5 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 440: namely, 15 secondary, 410 primary, and 15 special schools. The expenditure on education was Rs. 64,000, of which Rs. 38,000 was met from Provincial funds, Rs. 7,000 from fees, and the remainder from endowments, subscriptions, and other sources.

Medical.

In 1903 the District contained two dispensaries, of which one had accommodation for 14 in-patients. The cases of 3,600 out-patients and 154 in-patients were treated, and 179 operations were performed. The expenditure was Rs. 2,700, of which Rs. 700 was met from Government contributions, Rs. 1,400 from municipal funds, and Rs. 500 from subscriptions.

Vaccina-
tion.

Vaccination is compulsory only within the Chaibāsa municipality. In the whole District the number of persons successfully vaccinated in 1903-4 was 19,000, or 31 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xvii (1877); J. A. Craven, *Final Report on the Settlement of the*

Kolhān Government Estate (Calcutta, 1898); F. B. Bradley-Birt, *Chotā Nāgpur* (1903).]

Kolhān.—Government estate in Singhbhūm District, Bengal, lying between $21^{\circ} 58'$ and $22^{\circ} 43'$ N. and $85^{\circ} 21'$ and $86^{\circ} 3'$ E., with an area of 1,955 square miles. The Kolhān is a low plateau, varying in elevation from 750 feet above sea-level in the neighbourhood of Chaibāsa to upwards of 1,000 feet in the south. On the north, east, and south, the country is for the greater part open and gently undulating; it is covered with prosperous villages and is well cultivated, the depressions between the ridges being invariably sown with rice and some portion of the uplands with cereals, pulses, or oilseeds. In the south-east the surface is very rocky and covered with jungle; and in the west and south-west are mountainous tracts thickly covered with jungle and very sparsely inhabited. The villages here are mere hamlets scattered on the hill slopes, and an area of 529 square miles has been formed into forest Reserves.

The majority of the inhabitants are Hos, and British relations with them date from 1820. At that time the tract was a refuge for fugitive offenders from Chotā Nāgpur, and plundering excursions were frequently made by the Hos into the neighbouring territories. They thus became a thorn in the side of the Rājā of Porāhāt and of the other chiefs in the north of Singhbhūm. The British Government, desirous of putting an end to the plundering excursions, formed relations with the Rājā of Porāhāt, and assisted him and the Saraikeḷā and Kharsāwān chiefs in bringing the Hos into submission. The chiefs, however, were unable to keep them in order, and in 1837 the British Government resolved to take the territory under its direct control. Colonel Richards entered the country with a strong force and secured their submission, after which 23 Ho *pīrs* or *parganas* were detached from the control of the Singhbhūm chiefs and 4 from Mayūrbhanj, and formed into the Kolhān Government estate. There was no further trouble until 1857, when the Hos joined the mutinous Rājā of Porāhāt, and a long and troublesome campaign took place, which terminated with the surrender of the Rājā in 1859.

The indigenous village-system of the Kols, based upon a federal union of villages under a single divisional headman, which is gradually dying out elsewhere in Chotā Nāgpur, still survives in this tract. The whole estate is divided into groups of from 5 to 20 villages. Each village has its own *mundā* or headman, all of whom are subject to the authority of the

mānki or divisional headman. Every *mundā* is responsible for the payment of the revenue, and for the detection and arrest of criminals in his village, to the *mānki*, who is in his turn responsible to Government. For acting as revenue collectors, the *mānkis* receive a commission of 10 per cent and the *mundās* 16 per cent. of the revenue which passes through their hands. Besides these duties, the *mānkis* and *mundās*, each in his degree, have certain informal powers to decide village disputes and questions of tribal usage. Persons other than Hos are not allowed to settle in the estate without the permission of the Deputy-Commissioner. The last settlement was effected in 1897, when the gross rental was fixed at Rs. 1,77,000, subject to a deduction of Rs. 49,000 on account of commission to *mānkis*, *mundās*, and *tahsildārs* (as the village accountants are here called). A uniform rate of 12 annas per acre was charged for embanked rice cultivation, and 2 annas for uplands. New *dikkus* or non-Hos were assessed at double these rates. Of the total area, 525 square miles were cultivated, 450 square miles were cultivable, and 219 square miles uncultivable waste; 212 square miles were 'protected' forest, 529 square miles 'reserved' forest, and 20 square miles *lākhirāj* or revenue free. Chaibāsa, the headquarters of Singhbhūm District, which lies within the estate, is assessed under a separate settlement.

[J. A. Craven, *Final Report on the Settlement of the Kolhān Government Estate* (Calcutta, 1898).]

Porāhāt.—Estate in the north-west of Singhbhūm District, Bengal, lying between 22° 15' and 22° 54' N. and 85° 5' and 85° 46' E., with a total area of 813 square miles, or 514 square miles if its dependencies be excluded. It is for the most part hilly and is largely covered with forest. A fairly open belt of country runs from the north-east to the south-west; this has been opened up by the Bengal-Nāgpur Railway, and is healthier and more extensively cultivated than the remainder of the estate.

In former times the whole of Singhbhūm proper was ruled by a family of Rāthor Rājputs, claiming descent from an officer of Rājā Mān Singh's army which was sent to Bengal at the time of Daud Khān's rebellion. The States of Saraikelā and Kharsāwān were carved out of the original State for junior members of the Rājā's family; and the chief of Saraikelā gradually extended his power and dominions until he became a serious rival to the head of the family, who was now known as the Rājā of Porāhāt. The country was saved by its rocky

boundaries and sterile soil from conquest by the Marāthās, and was still independent when, in 1818, Rājā Ghanasyām Singh Deo tendered his allegiance to the British Government. His chief objects were to secure a recognition of his supremacy over the Rājās of Saraikelā and Kharsāwān, and to obtain aid in reducing the refractory tribe of Larkā Kols or Hos. The British Government disallowed his claim to supremacy over his kinsmen of Saraikelā and Kharsāwān, but accepted merely a nominal tribute of Rs. 101, and refrained from interfering in any way with the internal administration of the State. An engagement embodying these conditions was taken from him in 1820. It was intended that similar agreements should be entered into by the chiefs of Saraikelā and Kharsāwān; but the matter appears to have been overlooked, and those chiefs have never paid tribute, though they have frequently been called upon to furnish contingents of armed men to aid in suppressing disturbances. The Porāhāt family gradually sank into poverty; and in 1837 the Rājā received a pension of Rs. 500 as a compassionate allowance, in compensation for any losses he might have sustained in consequence of our assumption of the direct management of the Kolhān. In 1857 Arjun Singh, who was then Rājā, after delivering up to Government the Chaibāsa mutineers, himself rebelled. He was captured and deported to Benares, and his State was confiscated. Some portions of it were given to the chiefs of Saraikelā and Kharsāwān, and to one or two other persons who had helped Government during the Mutiny; and the rest, on Arjun Singh's death, was regranted in 1895 to his son Narpat Singh, 'to be held by him and his lineal male heirs according to the custom of lineal primogeniture (the eldest male of the eldest branch being preferred) as an inalienable and impartible revenue-free *samāndāri*.' Anandpur and Kerā were formerly *khorsosh* or maintenance grants made by the Rājā of Porāhāt to junior members of the family, and their holders paid quit-rents to him; these were remitted by Government after the Mutiny, and Narpat Singh has now no right to receive rents from or to interfere with them, but he has a reversionary right of succession in the event of extinction of male heirs. Bāndgaon and Chhapur are under-tenures, the rent of which has been fixed in perpetuity. The forests of the Porāhāt estate are managed for the Rājā's benefit by the Forest department.

The estate (excluding the dependencies) is divided into ten groups of villages or *pīrs*. Two of these, which lie in the more

open part of the country, are known as the Sadant *pīrs*, and the remainder as the Kolhān *pīrs*. The estate has recently been resettled for fifteen years from 1903. In Porāhāt proper 159 square miles are cultivated, and 73 square miles are cultivable waste, 38 square miles are uncultivable, and 244 square miles are under forest. The chief crop is rice, but some millets and pulses are also grown, especially in the more hilly Kolhān *pīrs*. The rates for the best rice land vary from R. 0-12-7 per acre in the Kolhān to Rs. 1-9-2 in the Sadant *pīrs*; and the total rental fixed at the settlement was Rs. 38,000, rising to Rs. 42,000 after five years.

Chaibāsa.—Head-quarters of Singhbhūm District, Bengal, situated in 22° 33' N. and 85° 49' E., on rising ground overlooking the right bank of the Raro river. Population (1901), 8,653. Chaibāsa was constituted a municipality in 1875. The income during the decade ending 1901-2 averaged Rs. 8,000, and the expenditure Rs. 7,000. In 1903-4 the income was Rs. 12,000, mainly derived from a tax on houses and lands, a conservancy rate, and a tax on vehicles; and the expenditure was Rs. 10,000. The town lies within the Kolhān Government estate. It contains the usual public offices. The District jail has accommodation for 230 prisoners, who are employed on oil-pressing, cloth, *darī* and carpet-weaving, and *sabai* string-making.

Chakradharpur.—Village in Singhbhūm District, Bengal, situated in 22° 41' N. and 85° 37' E., on the Bengal-Nāgpur Railway, 194 miles from Calcutta. Population (1901), 4,854. It is an important railway centre.

Saranda.—Hill range in the extreme south-west corner of Singhbhūm District, Bengal, lying between 22° 1' and 22° 28' N. and 85° 0' and 85° 26' E., bordering on the Gāngpur State. It consists of a mass of mountains, rising to the height of 3,500 feet. The population inhabiting this region is scattered over a few poor hamlets nestling in deep valleys, and belongs for the most part to the Ho and other aboriginal tribes.

NATIVE STATES AND FRENCH POSSESSIONS

Cooch Behār State (*Kuch Bihār*).—Feudatory State in North Bengal, lying between $25^{\circ} 58'$ and $26^{\circ} 32'$ N. and $88^{\circ} 45'$ and $89^{\circ} 52'$ E., with an area of 1,307 square miles. It is bounded on the north by the District of Jalpaiguri; on the east by Goālpāra; on the south by Rangpur; and on the west by Rangpur and Jalpaiguri. Boun-
daries, con-
figuration,
and river
system.

Cooch Behār is a low-lying plain, the whole of which has at one time or another been subject to fluvial action. It is intersected by several large rivers; but they are of no use for drainage purposes, except in the cold season, when they are at their lowest, and even then the fall is so small that they are not very effective. Moreover, any attempt to cut drainage channels to them would lead in the rains to an inundation, rather than the drainage of the area they might be constructed to serve. The State generally is, in fact, hopelessly waterlogged, and during the rains it is not uncommon to see the wells overflowing.

The general direction of the rivers is from the north-west to the south-east; they rise in the Himālayas and fall into the main stream of the Brahmaputra. The most important are the Tīsta on the west and the Sankosh on the east, while between these two are situated the Dharlā, the Torsā, the Kāl jāni, the Raidāk, and other minor streams. The Tīsta enters the State within a few miles of its western boundary and flows in a south-easterly direction for about 15 miles, when it passes into Rangpur. The Jaldhākā, which is called in Bhutān the Di-chu, enters the State at the north-west corner and flows more or less parallel to the Tīsta. It receives as tributaries the Gilāndi, Duduyā, Mujnai, and—later during its course when it is called the Mansai—the Satangā, Dolang, and Dharlā; after its junction with the river last named it assumes the name of Singīmāri. It is finally joined by the old channel of the Torsā, locally called the Dharlā, under which name the united stream leaves the State, after a course of about 60 miles within it with an average breadth of 400 to 500 yards throughout. It is shallow in the dry season, but liable to heavy floods during the rains. The Torsā bifurcates in its course, one branch flowing south under the name of Dharlā and falling into the

Singīmāri (Jaldhākā), while the other turns eastward and falls into the Kālajāni. The Kālajāni in its turn meets the Raidāk, which subsequently joins the Gadādhār; and the united river falls into the Brahmaputra by two mouths, the southern one being known as the Dudhkumār and the northern as the Sankosh.

Botany.

The soil is everywhere alluvial. Where the ground is not occupied by the usual crops of North Bengal, it is covered with an abundant natural vegetation. Old river-beds, ponds, marshes, and streams with a sluggish current have a copious vegetation of *Vallisneria* and other plants. Land subject to inundation has usually a covering of *Tamarix* and reedy grasses; and in some parts, where the ground is more or less marshy, *Rosa involucrata* is plentiful. Few trees occur on these inundated lands; the most plentiful and largest is *Barringtonia acutangula*. On the higher ground also the trees are few and usually rather stunted, and the greater portion of the surface is covered with grasses, the commonest of these being *Imperata arundinacea* and *Andropogon aciculatus*. Among the trees the most conspicuous is the red cotton-tree (*Bombax malabaricum*). The *sissū* (*Dalbergia Sissoo*) and the mango occur as planted or sometimes self-sown species, bamboos grow in profusion, and palms, especially the areca, are common. Near villages there are usually thickets or shrubberies, and more or less useful trees of a rapid growth and weedy character. A few tracts are maintained as shooting reserves, but these consist mainly of grass jungle, and there is no real forest.

Fauna.

The big game with which the State formerly abounded has receded northwards before the advance of cultivation, and within its limits the only wild animals now found are leopards, bears, deer, and hog. Of small game, florican and francolin are plentiful in some of the grassy plains.

Temperature and rainfall.

The temperature is rarely excessive, the thermometer never rising above 93° in the shade and seldom so high, but the abnormal humidity makes the climate very trying and unpleasant. The lowest recorded temperature is 49° and the mean about 78°. The annual rainfall averages 123 inches, of which 5.1 are received in April, 14 in May, 29.4 in June, 24 in July, 22.4 in August, 19.4 in September, and 5.5 in October.

Natural calamities.

In 1887 a severe cyclonic storm caused great havoc over a tract 25 miles in length and 8 in breadth, including Cooch Behār town. The earthquake of 1897 caused enormous damage

to property. The bridges along the railway were broken and the permanent way was much cut up by fissures; roads with their bridges suffered similarly, and the total damage done to property, communications, wells, and tanks was approximately 20 lakhs. Tremors and shocks were frequent for a year after the main upheaval, during which jets of hot water and sand issued from the fissures. Prior to 1897 the severest and most frequent shocks of recent years were felt in 1885. Dr. Buchanan-Hamilton makes mention of the frequency of earthquakes in this part of Bengal in 1808. The State has occasionally suffered severely from floods, the most memorable being those of 1787, 1822, 1842, and 1878.

This tract once formed part of the ancient and famous kingdom of Kāmarūpa. In the fifteenth century it was ruled by a dynasty of Khen kings, the last of whom, Nilāambar, was overthrown by the Afghāns under Alā-ud-dīn Husain, king of Gaur, in 1498. Local traditions of this dynasty are still current, and more than one of its capitals are pointed out at the present day. Alā-ud-dīn appointed his son governor over Nilāambar's territories with the object of pushing his conquest farther east, but the latter was eventually defeated and his troops driven out of the country. A period of anarchy ensued, during which a number of petty principalities were formed by independent local rulers called Bhuiyās, and a fresh kingdom was then established by the Koch. A divine parentage is ascribed to the Koch kings: the tradition is that the god Siva fell in love with Hirā, the wife of a Koch chief named Hājo, and the result of their intimacy was a boy named Bisu or Biswa Singh. The account current in the State, however, is that the kingdom was founded in 1510 by a chief named Chandan, and that he was succeeded by his cousin, Biswa Singh. The latter soon proved himself to be a mighty conqueror, and brought under his rule the whole tract from the Karatoyā on the west to the Barnadī on the east. He was succeeded about 1540 by his son Nar Nārāyan, the greatest of the Koch kings, who, with the aid of his brother Silarai, conquered all the neighbouring countries to the east and south, and even ventured to wage war with the Muhammadans. After Silarai's death, his son Raghu rebelled (in 1581), whereupon Nar Nārāyan divided his kingdom into two parts and gave up Raghu the portion east of the Sankosh river. This event led to the downfall of the Koch dynasty. Nar Nārāyan died in 1584; and his son, Lakshmī Nārāyan, who succeeded him, having quarrelled with Raghu's son, Parikshit, invoked the aid of the Mughals and

declared himself a vassal of the emperor of Delhi. The history of the Koch kings now loses all general interest. The eastern kingdom was gradually absorbed by the Ahoms, while the western was shorn of its outlying possessions by the Mughals on the south and west and by the Bhotiās on the north, until at last only the modern State of Cooch Behār remained in the precarious possession of Biswa Singh's descendants. Internal affairs also fell into deplorable confusion. In accordance with the curse of the Hindu political system, three families, all scions of the royal stock, the Nāzir Deo, the Dīwān Deo, and the Raikat of Baikuntpur, each claimed an hereditary position which was inconsistent with unity of administration, and did not hesitate to call in the foreign foe to support their pretensions.

It was under these circumstances that the attention of the East India Company was first attracted to Cooch Behār and its affairs. In 1772, the Nāzir Deo having been driven out of the country by his rivals, who were aided by the Bhotiās, and the Rājā having fled to Pāngā, the former applied for assistance to Warren Hastings, then Governor of Bengal. A detachment of sepoys was accordingly marched into Cooch Behār, and the Bhotiās were expelled after a short resistance and forced to sue for peace through the intervention of the Lāma of Tibet. The treaty between the East India Company and the Rājā of Cooch Behār made on this occasion bears date April 5, 1773. By the third clause the Rājā acknowledged subjection to the East India Company and consented to his country being annexed to the Province of Bengal. This right of annexation was, however, eventually waived by the Government. In subsequent clauses the Rājā promised to make over one-half of his annual revenues, according to an assessment to be made by the Company. This moiety was permanently fixed by the Collector of Rangpur in 1780 at Rs. 67,700. Fresh domestic dissensions soon reduced the administration to a deplorable condition, and in 1788 a Commission of two Civil Servants was nominated to inquire into the state of the country. The Commissioners concluded their report by recommending the appointment of a Resident or Commissioner at the town of Cooch Behār. This office subsequently became merged in that of Governor-General's Agent for the North-East Frontier. The present Mahārājā, His Highness Chhetri Sir Nripendra Nārāyan Bhūp Bahādur, G.C.I.E., C.B., was placed on the *gaddi* on August 6, 1863, when he was only ten months old. In January, 1864, the succession was sanctioned by Government, but a British

Commissioner was appointed to undertake the direct management of affairs during the minority of the young ruler. Several salutary reforms were thus introduced: a complete survey and settlement was made, and the various departments of the State were put upon the firm and substantial basis which underlies the present system of administration. The Mahārāja received a wholly European training and education, and has at various times visited England. In 1878 he married the eldest daughter of the great religious reformer Keshab Chandra Sen, and in 1883 he assumed charge of the State. He took part in the Tirāh campaign in 1897 and is an aide-de-camp to the King-Emperor. The Mahārāja is entitled to a salute of 13 guns.

Ruins of an old city founded by Rājā Nīladhvaj exist at KAMĀTĀPUR.

The population increased from 532,565 in 1872 to 602,624 The in 1881, a gain of 13.1 per cent., but most of this was apparently people. due to improved methods of enumeration. Ten years later it fell to 578,868, owing mainly to the unhealthiness of the climate and, to a smaller extent, to emigration. In 1901 a further decline of 2.05 per cent. took place, the population decreasing to 566,974. The only *thāna* in which an increase occurred was Haldibāri, the principal centre of the jute trade. This is on the Eastern Bengal State Railway, and enjoys with Cooch Behār town the reputation of being the healthiest portion of the State. The falling off was greatest in the head-quarters *thāna*, where it was due not only to unhealthiness, but also to migration to Fulbāri. The State is liable to very severe epidemics of cholera. Insanity is more common than elsewhere in Bengal, and deaf-mutism and leprosy are also prevalent. The population is contained in 1,192 villages and four towns: COOCH BEHĀR, the head-quarters, MĀTĀBHĀNGA, HALDĪBĀRI, and DINHĀTA. The villages are not compact as in most parts of Bengal, but each farmer ordinarily lives apart in a separate homestead on his own land surrounded by his farm servants and adherents. The average number of persons per square mile in 1901 was 434, the density being greatest in the south. There is some immigration from Sāran and other Bihār Districts and the United Provinces. The vernacular of the State is the Ranjuri or Rājbanśī dialect of Bengali. Hindus number 397,9 or more than 70 per cent. of the total population, and Mu māns 168,236, or most of the remainder.

The Rājbanśis or Koch (338,100) are the distinctive caste of the State, forming 60 per cent. of the total, while most of Castes and occupations.

the Nasyas (43,000) and Shaikhs (124,000) represent descendants of converts from this caste to Muhammadanism. Though the Koch freely call themselves Rājbanis, it is believed (see *Bengal Census Report*, 1901, part i, pp. 382-3) that the two communities originally sprang from entirely different sources, the Koch being of Mongoloid origin, while the Rājbanis are a Dravidian tribe who probably owned the name long before the Koch kings rose to power. In Cooch Behār the persons now known as Rājbanis are either pure Koch, who though dark have a distinctly Mongoloid physiognomy, or else a mixed breed in which the Koch element usually predominates. The population is almost entirely agricultural, 86.5 per cent. being dependent on agriculture for their livelihood, 4.9 per cent. on industries, and 1.4 per cent. on the professions.

Christian
missions.

Christians number 143, of whom 24 are natives. A Swedish mission called the Scandinavian Alliance Mission works in Cooch Behār town, but has made no local converts.

General
agricul-
tural con-
ditions.

The soil is of alluvial formation, with a large admixture of sand and a substantial deposit of light loam to a depth of about two feet. Towards the west the soil is stiffer and contains a larger proportion of clay than sand. High-lying lands are used mainly for homesteads or for tobacco cultivation and, to a certain extent, where they contain a good admixture of sand, for the cultivation of the *bītari* or spring rice crop. On low-lying lands, possessing a smaller proportion of sand, *haimantik* or autumn rice is usually grown.

Chief agri-
cultural
statistics
and princi-
pal crops.

In 1903-4 the net area cropped was 638 square miles, 159 square miles were current fallow, 295 were cultivable waste other than fallow, and 199 were not available for cultivation, while 15 square miles were under forest. Of the net cropped area, 26 square miles were estimated to be twice cropped. By far the most important staple is rice, of which there are two crops; the *bītari* or early crop is sown broadcast, while the *haimantik* or late one is transplanted. Other food-crops are *chanī*, *kaon*, maize, and various pulses, including *mūng*, *masūr*, *khesāri*, *thākari*, *kurthā*, and *rahar*. Oilseeds, principally mustard, are extensively cultivated. The local tobacco, which is grown on 55 square miles, is a very important crop and has a high reputation. Burma cheroots are usually manufactured from tobacco grown in Cooch Behār and the adjoining British Districts. Jute is grown on 34 square miles; and that grown in Haldībāri and Caturābāt is of exceptionally good quality and commands a high price in the Calcutta market.

The cultivation of sugar-cane has been only recently intro-

duced, but is increasing. Cultivation generally is extending, but cultivators are averse to the adoption of new methods ; the only manure used is cow-dung for the tobacco crop.

There is no dearth of pasturage, but the local cattle are of a very small and inferior breed. The State keeps some bulls for breeding purposes, but the crossing of heavy imported bulls with the light local cattle has not proved a success. Large numbers of cattle yearly die from rinderpest, and a veterinary officer has recently been appointed to perform inoculations in the localities chiefly affected. Bullocks for draft purposes are imported in numbers from Sonpur and elsewhere, and sold at fairs at Haldibāri and Chaurāhāt.

The State contains innumerable tanks, besides 40 masonry wells, 85 Rāniganj pipe-wells, and 30 tube-wells ; but for irrigation it depends entirely on its heavy rainfall. Famine is unknown.

A rough cloth is prepared from the silk of the *endi* worm, which is fed on the castor-oil plant. Coarse cotton fabrics are woven for local use, and the Gāro and Mech women make cloths of variegated colours for their own wear. A considerable amount of excellent gunny cloth is made, especially in Mekhliganj ; this locality was once noted for the manufacture of coloured carpets and curtains woven from pure jute and known as *mekihli*, but the industry is dying out. *Ghi* and mustard-oil are made in large quantities, and molasses to a limited extent in the west and south.

The chief exports are tobacco, jute, rice, mustard seed and mustard oil ; and the chief imports are cotton piece-goods, kerosene oil, sugar, molasses, salt, and brass, copper, and earthenware utensils. Jute and rice are exported from all parts of the State, the baled jute going mainly to Calcutta and the unbaled to Sirājganj. The tobacco trade is chiefly in the hands of Magh merchants, who pay yearly visits to Mekhliganj and Lāl Bazar and purchase almost the entire crop for export to Burma. Several European jute firms are established at Haldibāri and Chaurāhāt, but otherwise most of the trade is in the hands of Mārwarī merchants. Some tobacco, mustard seed, and mustard oil are sent down by water to Dacca. Rice is largely exported to the tea gardens in the Duārs and sometimes by rail to Sirājganj. The railway extension in the State has recently given considerable impetus to both the jute and tobacco trade, though the Mārwarī and other native trade ; still prefer the river routes to the railway.

Improve-
ments in
agricul-
tural
practice.
Cattle.

Irrigation

Arts and
manufac-
tures.

Commerce.

Railways. The Cooch Behār State Railway (2 feet 6 inches gauge) runs from Gitaldāha junction, where it connects with the Eastern Bengal State Railway system, to Jaintia at the foot of the Bhutān hills; its total length is $53\frac{1}{2}$ miles, of which $33\frac{1}{2}$ lie within the State. The new extension of the Eastern Bengal State Railway from Mughal Hāt to Dhubri runs through the south-east of the State for a distance of 12 miles, and on the west the northern section of the line runs for a distance of $5\frac{3}{4}$ miles. A short section ($2\frac{3}{4}$ miles) of the Bengal-Duār Railway from Barnes Ghāt to Lālmanir Hāt also lies within the State. These three lines are all on the metre gauge.

Roads. The State contains 382 miles of road, of which $5\frac{1}{2}$ miles in Cooch Behār town are metalled; there are also 187 miles of village tracks. The most important roads are the emigration road which runs eastward through the State to Dhubri, passing through Haldibāri, Mekhliganj, Pātgrām, Mātābhānga, and Cooch Behār town, and the Buxa and Rangpur roads.

Water communications. The Tista is navigable by boats of 3 or 4 tons burden throughout the year. The Jaldhākā is navigable by boats of 7 tons burden up to the junction of the Mujnai, whilst boats of smaller tonnage can go as far as Falākātā in Jalpaiguri District. The Kālajāni is a deep stream and carries a considerable river traffic; boats of 7 to 11 tons come up all the year round, and timber from the Western Duārs is floated in considerable quantities down this river to the Brahmaputra from Alipur. The most important ferry is that over the Tista river.

Administration. For administrative purposes the State is divided into five subdivisions: Cooch Behār, Dīnhāta, Mātābhānga, Mekhliganj, and Tufānganj. At the head of the administration is the State Council, which consists of His Highness the Māhārājā Bhūp Bahādur as president, the Superintendent of the State as vice-president, the Dīwān as revenue member, and the Civil and Sessions Judge as judicial member. In judicial matters the powers of the High Court have been delegated to it, while in revenue matters it sits as a Board of Revenue; it exercises also legislative and executive powers.

The Superintendent of the State, who is an officer lent by the British Government, is the executive head of criminal justice, police, jail, education, public works, and other minor departments. The Dīwān is in charge of the revenue department, being responsible for the collection of all kinds of revenue and the supervision of all proceedings in connexion with it; he exercises the powers of a Collector in a British

District, and in some cases those of a Commissioner. The subdivisions are in charge of *naib ahlkār*s ; the head-quarters *naib ahlkār* is the general assistant of the Dīwān in executive matters and also holds charge of the State treasury. Below the *naib ahlkār*s is a grade of sub-*naib ahlkār*s, whose powers are similar to those of Sub-Deputy-Magistrate-Collectors in Bengal. The *naib ahlkār*s and sub-*naib ahlkār*s are assisted by divisional *kānungos*, who are employed on survey and inquiry work.

The principal courts are the State Council, which is the highest appellate court in all branches of judicial administration, the courts of the Civil and Sessions Judge, the *Faujdarī Ahlkār*, and the Assistant Sessions Judge. On the criminal side the Civil and Sessions Judge exercises all the powers vested in a Sessions Judge according to the provisions of the Criminal Procedure Code, except that under the rules of the State capital punishment is never resorted to. In his civil capacity he discharges the functions of a District Judge, as defined by the Civil Procedure Code. An appeal lies to him from the decisions of the Assistant Civil Judges and the *naib* and sub-*naib ahlkār*s. He is also *ex-officio* registrar of deeds. The *Faujdarī Ahlkār* exercises the powers of a District Magistrate, as defined in the Criminal Procedure Code ; he is also in charge of the jail. The powers of the Assistant Civil Judges extend in the Cooch Behār subdivision to title suits, suits ordinarily dealt with by a Small Cause court, and rent suits of which the value does not exceed Rs. 1,000, and in the other subdivisions to title suits of which the value exceeds Rs. 500, but is not above Rs. 1,000. The *naib* and the sub-*naib ahlkār*s have both civil and criminal jurisdiction ; the former exercise the powers of subdivisional officers as defined in the Criminal Procedure Code, and the latter are second or third-class magistrates, as the case may be. The *naib ahlkār*s are also sub-registrars, and exercise powers extending to all title suits up to the value of Rs. 500 and to all rent suits and suits of a Small Cause court nature up to the value of Rs. 1,000. The sub-*naib ahlkār*s exercise jurisdiction in title suits up to the value of Rs. 50, and in rent suits and suits of a Small Cause court nature up to the value of Rs. 100, each in his respective subdivision. In criminal matters they are subordinate to the *Faujdarī Ahlkār*, and on the civil side to the Civil Judge.

The total revenue under the main heads amounted in 1903-4 Revenue to 23.29 lakhs, of which 13.66 lakhs was derived from land revenue, 1.52 lakhs from stamps, 1.11 lakhs from excise and

opium, 1.39 lakhs from the Cooch Behār State Railway, 4.91 lakhs from the Mahārājā's estates outside Cooch Behār, and Rs. 69,000 from other sources. The receipts under the same heads in 1880-1, 1890-1, and 1900-1 were 12.95, 18 00, and 22.55 lakhs respectively. The Cooch Behār State Railway had not been constructed in the two first years.

Land
revenue.

There is very little information as to the land revenue arrangements before the State came into contact with the British in 1773. At that time revenue was collected by the State officers direct from the *jotdārs* or persons holding revenue-paying estates under the State, but in 1790 the collection of the revenue was entrusted to *ijāradārs* or farmers. The system was unsatisfactory and resulted in a great deal of oppression, and during the minority of the present Mahārājā the State was completely surveyed and settlement was made direct with the *jotdārs*; the operations were concluded in 1877, and the demand was then fixed at 9.39 lakhs. A subsequent resettlement of the State concluded in 1897 raised the demand to 12.41 lakhs, the increase being distributed over five years; the term of this settlement will expire in 1917-8. In addition, a few permanently settled estates pay an annual revenue of Rs. 7,000. A comparatively small quantity of land is held revenue free or on service tenures. The *jotdārs* pay the State a revenue assessed according to the rates fixed for lands which have been measured and classified; their holdings are heritable and transferable, and are liable to be sold summarily for arrears of revenue. They can also be resumed by the State on the violation of the terms of the lease or for a public purpose, compensation being paid in the case of temporarily settled estates for standing crops and homesteads, while a fair and equitable price is paid or an exchange of land is made in the case of permanently settled estates. Below the *jotdārs* are several grades of under-tenures known successively as *chukānis*, *dar-chukānis*, *daradar-chukānis*, *tasya-chukānis*, *tali-chukānis*, and *tasya-tali-chukānis*. At the time of the settlement it was found that the average area of a *jot* was 37 acres, of a *chukāni* holding 7 acres, of a *dar-chukāni* 5 acres, and of a *daradar-chukāni* $2\frac{2}{3}$ acres, while the lower grade holdings averaged between $2\frac{1}{3}$ and $2\frac{2}{3}$ acres. The quantity of land held on an average by the *jotdār* is not sublet to under-tenants is 10 acres. The rates per acre for cultivated land payable by the *jotdārs* vary from Rs. 1-14 to Rs. 3 for low lands, and from 15 annas to Rs. 1-11 for high lands other than garden and homestead lands and lands on which the valuable betel-

nut and tobacco crops are grown, for which special rates are fixed. The *chukāni* rates are 35 per cent. in excess of the *jot* rates; and where there are other holders below the *chukānidār*, the cultivating ryot pays a rate of 60 per cent. in excess of the *jot* rate, the profit of 25 per cent. being divided between the *chukānidār* and any other intermediate middlemen.

The administration of excise is conducted on the same principles as those adopted in British territory. The State has its own excise department, each subdivision is an excise circle, and the out-still system has been introduced. The greater portion of the excise revenue is derived from the duty and licence fees on *gānja* and hemp drugs; next in importance come the receipts from the sale of country spirit; and a considerable amount is also realized from the duty and licence fees on opium. Poppy was formerly grown and opium manufactured in the State; but in 1867 the cultivation of poppy was prohibited, on the British Government agreeing to supply opium at cost price. The cultivation of *gānja* has also been stopped, and the drug is obtained from the British District of Rājshāhi. The stamp revenue is collected under special Acts passed by the State Council. It is mainly derived from judicial documentary and court-fee stamps; copying-fee stamps and receipt stamps form a minor source of income. The stamps last mentioned have been in use only since 1903. No customs or transit dues are levied, and there is no tax on salt.

At Cooch Behār town and the subdivisional head-quarters of Local self-Dinhāta and Mātābhānga, and at Haldibāri in the Mekhliganj subdivision, there are town committees appointed by the State, consisting of official and non-official members in the proportion of two to one; subject to the general control of the Council, the management of all matters ordinarily entrusted to municipalities rests in the hands of these bodies. The funds administered by the town committees are derived mainly from *chaukidāri* and latrine taxes, supplemented by State grants.

The maintenance of the Mahārāja's palace and of all public buildings and communications is in the hands of a Public Works department. The average annual outlay of the department is about 1½ lakhs, of which about Rs. 50,000 is devoted to the maintenance of communications.

The State employs 156 sepoy and *sowārs* of all ranks for Army guard, orderly, and escort duties; these are under the command of the Superintendent of the State.

The State contains 7 police stations or *thānas*. The strength

Police and jails. of the force subordinate to the Superintendent of Police consists of 2 inspectors, 11 sub-inspectors, 24 head constables, and 262 constables, in addition to a rural and municipal police numbering respectively 1,571 and 43. The annual cost of the maintenance of the force averages Rs. 53,000, and the proportion of police to population is 1 to 4,079. The jail at Cooch Behār town has accommodation for 189 prisoners, in addition to which there are lock-ups at the other subdivisional head-quarters.

Education. Education has made considerable progress in recent years, and the number of persons able to read and write more than doubled between 1881 and 1901; in the latter year 5.9 per cent. of the population (10.7 males and 0.4 females) were returned as literate. The number of pupils under instruction increased from 10,194 in 1892-3 to 12,670 in 1901-2, in which year 26.2 per cent. of the boys and 0.36 per cent. of the girls of school-going age were at school. In 1903-4 there were altogether 12,639 pupils under instruction, and the number of educational institutions was 333, including one Arts college, 43 secondary schools, 37 night schools, and 9 girls' schools. The expenditure on education was Rs. 79,000, of which Rs. 44,000 was contributed by the State, the remainder being derived from fees and subscriptions. The principal institutions are the Victoria College and the State high school in Cooch Behār town, and eight high schools at Mātābhānga, Mekhliganj, and Dīnhāta. The control of educational matters rests with the Superintendent, who is assisted by an Inspector and Deputy-Inspector of schools and circle *pandits*.

Medical. The medical charge of the State is in the hands of a European Civil Surgeon, who has under him an Assistant Surgeon and a large staff of native doctors and compounders. The State contains (1903-4) 9 dispensaries, of which 8 have accommodation for in-patients, the most important being the hospital at Cooch Behār town with 36 beds. At all these institutions the cases of 25,000 out-patients and 1,000 in-patients were treated during the year, and 907 operations were performed. The cost of their maintenance was Rs. 34,000, all of which, except a small sum derived from the sale of medicines, was borne by the State.

Vaccination. The annual number of vaccinations has been slowly increasing, and 24,044 operations were performed in 1903-4; under recent legislation vaccination may be made compulsory within affected areas by notification in the State *Gazette*.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. x

(1876); Harendra Nārāyan Chaudhri, *Cooch Behār State* (Cooch Behār, 1903).]

Cooch Behār Town.—Capital of Cooch Behār State, Bengal, and the principal residence of the Mahārājā, situated in $26^{\circ} 20' \text{ N.}$ and $89^{\circ} 27' \text{ E.}$, on the Torsā river. Population (1901), 10,458. The town is connected by the Cooch Behār State Railway with the Eastern Bengal State Railway system. It is well laid out, and local affairs are managed by a town committee appointed by the State. The principal buildings are the Mahārājā's palace, the courts, a hospital with 36 beds, and the jail with accommodation for 189 prisoners. The Victoria College was established in 1887 and is affiliated to the Calcutta University. A State high school is also situated here.

Dīnhāta.—Head-quarters of a subdivision of Cooch Behār State, Bengal, situated in $26^{\circ} 8' \text{ N.}$ and $89^{\circ} 28' \text{ E.}$, on the Rangpur road. Population (1901), 1,207. It contains a high school.

Haldibāri.—Town in the Cooch Behār State, Bengal, situated in $26^{\circ} 21' \text{ N.}$ and $88^{\circ} 49' \text{ E.}$, on the Eastern Bengal State Railway, 292 miles from Calcutta. Population (1901), 1,112. Haldibāri is an important centre of the jute trade, and several European firms have branches established here.

Kamātāpur.—Ruined city in Cooch Behār State, Bengal, situated in $26^{\circ} 23' \text{ N.}$ and $89^{\circ} 21' \text{ E.}$ The city is reputed to have been founded by Rājā Nīlādhvaj, the first of the Khen kings. Its ruins indicate that it must have been a very extensive place. Dr. Buchanan-Hamilton in 1809 found that it occupied an area 19 miles in circumference, 5 of which were defended by the Dharlā, and the rest by a rampart and ditch. The city consisted of several enclosures, one within the other, the centre one being occupied by the king's palace. Kamātāpur was abandoned and fell into decay after the overthrow of Rājā Nīlāmbār by Alā-ud-dīn Husain, king of Bengal, towards the close of the fifteenth century. Kamātāpur figures conspicuously as Comotay in some of the earlier maps of India.

[Sir W. W. Hunter, *Statistical Account of Bengal* (1876), vol. x, pp. 362-70.]

Mātābhānga.—Head-quarter of a subdivision of Cooch Behār State, Bengal, situated in $26^{\circ} 23' \text{ N.}$ and $89^{\circ} 50' \text{ E.}$, on the emigration road to Assam. Population (1901), 1,283. It contains a high school.

Orissa Tributary States. (also known as the Orissa

Boun-
daries, con-
figuration,
and hill
and river
systems.

Tributary Mahāls, or as the Garhjāts).—A group of seventeen¹ dependent territories, situated between the Mahānadī delta and the Central Provinces, and forming the mountainous background of the Orissa Division of Bengal. They lie between $19^{\circ} 53'$ and $22^{\circ} 34'$ N. and $83^{\circ} 35'$ and $87^{\circ} 10'$ E., and have an area of 14,387 square miles, and a population (1901) of 1,947,802. They are bounded on the north by the Districts of Singhbhūm and Midnapore; on the east by Orissa; on the south by Ganjām District in the Madras Presidency; and on the west by the Tributary States of Patnā, Sonpur, Rairākhhol, Bāmra, and Bonai. The names of the individual States are ATHGARH, TĀLCHER, MAYŪRBHANJ, NĪLGIRI, KEONJHAR, PĀL LAHARĀ, DHENKĀNĀL, ATHMALLIK, HINDOL, NARSINGHPUR, BARĀMBĀ, TIGIRĪĀ, KHANDPARĀ, NAVĀGARH, RANPUR, DASPALLĀ, and BAUD. A separate article on each will be found under its own name.

The States occupy a succession of ranges rolling back towards the centre of the peninsula. They form three watersheds with fine valleys between, down which pour the three great rivers of the inner table-land. The southernmost is the valley of the Mahānadī, at some places closely hemmed in by peaks on either side and forming picturesque passes, at others spreading out into fertile plains, green with rice, and watered by a thousand mountain streams. At the Barmūl pass the river winds round magnificently wooded hills, from 1,500 to 2,500 feet high. Crags and peaks of a wild beauty overhang its channel, which at one part is so narrow that the water rises 70 feet in time of flood. From the north bank of the Mahānadī the ranges tower into a fine watershed, from 2,000 to 2,500 feet high, running north-west and south-east and forming the boundary of the States of Narsinghpur and Barāmbā. On the other side they slope down upon the States of Hindol and Dhenkāl, supplying countless little feeders to the Brāhmanī, which occupies the second of the three valleys. From the north bank of this river the hills again roll back into magnificent ranges, running in the same general direction as before, but more confused and wilder, till they rise into the Keonjhar watershed with peaks from 2,500 to 3,500 feet high, culminating in Malayagiri, 3,895 feet above the sea, in the State of Pāl Laharā. This watershed, in turn,

¹ In 1905 five States (BĀMRĀ, RAIRĀKHOL, SONPUR, PATNĀ, and KĀLĀHANDĪ) were added from the Central Provinces, and two (GĀNGPUR and BONAI) from the Chotā Nāgpur States. These have an area of 13,659 square miles and a population (1901) of 1,225,593.

slopes down into the third valley, that of the Baitaranī, from whose eastern or left bank rise the mountains of Mayūrbhanj, heaped upon each other in noble masses of rock from 3,000 to nearly 4,000 feet high, sending countless tributaries to the Baitaranī on the south, and pouring down the Burhābalang and the feeders of the Subarnarekhā on the north. The hill ranges are densely wooded to the summit, and, except at the regular passes, are inaccessible to beasts of burden. The intermediate valleys yield rich crops in return for negligent cultivation, and a vast quantity of land might be reclaimed on their outskirts and lower slopes. Cultivation is, however, rapidly extending in all the States, owing to improved means of communication and to the pressure of population in the adjoining British Districts.

Besides Malayagiri, the principal peaks are Meghāsani (3,824 feet) in Mayūrbhanj; Gandhamādan (3,479 feet), Thākūrāni (3,003 feet), and Tomāk (2,577 feet) in Keonjhar; Pānchdhar (2,948 feet) in Athmallik; Goāldes (2,506 feet) in Daspallā; Suliya (2,239 feet) in Nayāgarh; and Kopilās (2,098 feet) in Dhenkānāl.

The principal rivers are the MAHĀNADĪ, the BRĀHMANĪ, the BAITARANĪ, and the Burhābalang. The Mahānadī enters the Tributary States in Baud, forming the boundary between that State on the south and Athmallik and Angul on the north for 49½ miles. It then divides Daspallā, Khandparā, and Cuttack District on the south from Narsinghpur, Barāmbā, Tigiriā, and Athgarh on the north. In the last State it debouches through a narrow gorge upon the Cuttack delta. It is navigable throughout the Tributary States by flat-bottomed boats of about 25 tons burden, and carries a considerable trade, which has decreased since the opening of the Bengal-Nāgpur Railway; it would afford even more valuable facilities for navigation but for the numerous rocks and sandbanks in its channel. Its chief feeders in the Tributary States are, on its north or left bank, the Sāpua in Athgarh, and the Dandātapā and Māno in Athmallik; on its south or right bank, the Kusumī and Kamai in Khandparā, with the Jorāmu, Hināmandā, Gānduni, Bolat, Sālkībāgh, Mārini, and Tel. This last stream divides the Orissa Tributary States from those of the Central Provinces, and forms the boundary between the States of Baud and Sonpur. The Brāhmanī, which is formed by the junction of the South Koel and Sānkh in Gāngpur State, enters Tālcher from Bhojai State, and passes through Tālcher and Dhenkānāl into Cuttack District. It is navigable

for a few months of the year as far as 4 miles below Tālcher, where there are some dangerous rocks. The Baitaranī rises among the hills in the north-west of Keonjhar State; its chief affluent is the Sālandī, which rises in Mayūrbhanj. In the dry season the Baitaranī is navigable by small boats, but with difficulty, as far as Anandpur, a large trading village in Keonjhar on its north bank. The Burhābalang rises in Mayūrbhanj and, after receiving two tributaries, the Gangāhar and Sunai, passes into Balasore.

Geology. So far as is known at present, gneissic rocks cover these States, except Tālcher and parts of Angul and Athgarh, where sandstones, conglomerate, and shales belonging to the Gondwāna system are developed¹.

Botany. The narrower valleys are often terraced for rice cultivation, and these rice-fields and their margins abound in marsh and water-plants. The surface of the plateau land between the valleys, where level, is often bare and rocky, but, where undulating, is usually clothed with a dense scrub jungle, in which *Dendrocalamus strictus* is prominent. The steep slopes of the hills are covered with a dense forest mixed with many climbers. *Sāl* (*Shorea robusta*) is often gregarious; and among the other noteworthy trees are species of *Buchanania*, *Semecarpus*, *Terminalia*, *Cedrela*, *Cassia*, *Butea*, *Bauhinia*, *Acacia*, and *Adina*, which are found also on the Lower Himālayan slopes. Mixed with these, however, are a number of trees and shrubs characteristic of Central India, such as *Cochlospermum*, *Soymida*, *Boswellia*, *Hardwickia*, and *Bassia*, which do not cross the Gangetic plain.

Fauna. Wild elephants infest the jungles of Athmallik, Barāmbā, Dhenkānāl, Hindol, Mayūrbhanj, Nīlgiri, and Narsinghpur, and the chiefs of some of these States carry on *khedda* operations in the beginning of the cold season. Game, big and small, is plentiful in most of the States, including tigers, leopards, hyenas, bears, bison, deer of several kinds, antelope, wild hog, hares, wild-fowl, peafowl, partridges, &c. Tigers carry off considerable numbers of men and cattle every year. Crocodiles swarm in the large rivers. Among snakes, pythons and the *ahirāj* or hamadryad (*Ophiophagus elaps*) are met with in the jungles, while cobras and *karāits* are responsible for hundreds of deaths by snake-bite.

**Climate
and
rainfall.**

No record has been kept of the temperature, but the climate is said to be similar to that of the rest of Orissa, except that it

¹ *Memoirs, Geological Survey of India*, vol. i, 'Geological Structure of Bānkurā, Midnapore, and Orissa.'

is hotter in summer and colder in winter. During a period of five years the annual rainfall has averaged 55 inches, of which 5.6 inches fell from January to May, 48.6 inches from June to October, and one inch in November and December. Failure of the autumn rains is not frequent, but it involves, when it does occur, a more or less serious failure of the rice crop. The low-lying lands on the banks of the Mahānadi and Brāhmanī are subject to devastating floods and to deterioration by the deposit of sand; the floods of 1866, 1872, 1894, and 1900 were especially destructive.

The Tributary States have no connected or authentic history. History. Comprising the western and hilly portion of the province of Orissa, they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, chiefly Bhuiyās, Savaras, Gonds, and Khonds, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who, by reason of their superior prowess and intelligence, gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rājputs from the north, came to Purī on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayūrbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspallā are said to be descended from the same stock; and a Rājput origin is also claimed by the Rājās of Athmallik, Narsinghpur, Pāl Laharā, Tālcher, and Tīgiriā. Nayāgarh, it is alleged, was founded by a Rājput from Rewah, and a scion of the same family was the ancestor of the present house of Khandparā. On the other hand, the chiefs of a few States, such as Athgarh, Barāmbā, and Dhenkānāl, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs covering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the para-

mount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors, the Mughals and Marāthās, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest.

The British conquest of Orissa from the Marāthās, which took place in 1803, was immediately followed by the submission of ten of the Tributary States, the chiefs of which were the first to enter into treaty engagements. Meanwhile, Major Forbes penetrated through the hilly and jungly country on the west and reached the famous Barmūl pass in Daspallā, the key to what is now the Central Provinces. Here the Marāthās made a last stand, but on November 2 the pass was forced and the enemy fled in confusion. The Rājā of Baud and others hastened to tender their submission. Including Khurdā, the Tributary States were then twenty in number. In the following year the chief of Khurdā rebelled, was vanquished, and forfeited his State, which is now a Government estate and is administered as a subdivision of Purī District. The Rājā of Bānki was deposed in 1840 for murder, and his State, which escheated to Government, has since been added to the District of Cuttack. In 1847 ANGUL was annexed on account of the misconduct of its chief, and with the KHONDMĀLS (originally a portion of Baud State) was in 1891 formed into a British District. Athmallik was a tributary of Baud and Pāl Laharā of Keonjhar, and they find no mention in the early treaty engagements. They were both recognized as separate States in the *sanads* of 1874, which at the same time conferred the hereditary title of Rājā on their chiefs. Pāl Laharā, however, still pays to Keonjhar a quit-rent, which is remitted through the Superintendent of the Tributary Mahāls. It has been held that these States do not form part of British India, and the status, position, and power of the chiefs are defined in the *sanads* granted to them in 1894.

Archaeo-
logy.

Some interesting archaeological remains are found at KHI-CHING in Mayūrbhanj State, including statues, pillars, mounds, and the ruins of several temples. The village of BAUD contains a number of small but exquisitely finished temples.

The
people.

The total population of the States increased from 1,103,699 in 1872 to 1,410,183 in 1881, to 1,696,710 in 1891, and to 1,947,802 in 1901. The earlier enumerations were very

defective, and the large increase brought out by each successive Census is due in a great measure to improvements in the arrangements for counting the people. At the same time, there is no doubt that the population is growing rapidly; the inhabitants are hardy and prolific, and there is ample room for expansion. Owing to the presence of low hills and forests, the climate of the greater part of the States is somewhat unhealthy, especially during the rainy season and the beginning of the cold season, when malarial affections prevail to a greater or less extent.

The principal statistics of the Census of 1901 are shown in the following table :—

Name of State.	Area in square miles	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Athgarh . .	168	...	192	43,784	260	+ 19.6	2,100
Tālcher . .	399	.	293	60,432	151	+ 14.7	1,275
Mayūrbhanj .	4,243	1	3,593	610,383	144	+ 14.7	13,115
Nilgiri . .	278	..	466	66,460	239	+ 18.3	3,660
Keonjhar . .	3,096	1	1,937	285,758	92	+ 15.2	7,348
Pāl Laharā .	452	.	265	22,351	49	+ 13.5	518
Dhenkānāl .	1,463	2	968	273,662	187	+ 14.8	9,392
Athmallik . .	730	..	460	40,753	56	+ 28.9	558
Hindol . .	312	..	234	47,180	151	+ 24.2	1,668
Narsinghpur .	199	..	198	39,613	199	+ 17.0	3,309
Barāmbā . .	134	..	181	38,260	285	+ 17.6	1,675
Tigiriā . .	46	...	102	22,625	492	+ 10.1	1,105
Khandparā .	244	..	325	69,450	284	+ 9.7	1,391
Nayāgarh . .	588	..	775	140,779	239	+ 19.4	12,013
Ranpur . .	203	.	261	46,075	227	+ 14.9	3,101
Daspaḷlā . .	568	...	485	51,987	92	+ 14.0	876
Baud . .	1,264	...	1,070	88,250	70	- 1.4	1,474
Total	14,387	4	11,805	1,947,802	135	+ 14.8	64,578

The only towns are DHENKĀNĀL and BHUBAN in Dhenkānāl, BARIPĀDĀ in Mayūrbhanj, and KEONJHAR in Keonjhar. The population is very sparse, but becomes denser on the lower levels as the plains of Orissa are approached. The greatest increase during the decade ending 1901 took place in the State of Athmallik, which gained by immigration from Baud and the Central Provinces, and in Hindol, which also received an accession of new settlers. The comparatively slow rate of increase in Tigiriā and Khandparā is explained by the fact that the population of these States is already much more dense than elsewhere. The only State which shows a loss of population is Baud, which suffered much from epidemic disease

and general unhealthiness, and from which many of the restless Khond inhabitants emigrated during the scarcity of 1900. As a general rule, the growth of the population has been greatest along the borders of the British Districts of Orissa, where the level is comparatively low and the proportion of arable land relatively high. The construction of the railway through Orissa and of feeder-roads in connexion with it has greatly improved the communications and raised the prices of produce in this tract. The volume of immigration is very considerable, and the Census of 1901 showed a net gain of 61,000 persons from contiguous territory in Bengal and 7,000 from the Central Provinces. Oriyā is the vernacular of 76.6 per cent. of the total population; Mundā dialects are spoken by 18.4 per cent., including Santālī (nearly 10 per cent.), Ho (5 per cent.), Bhumij, and Juāng; and Bengali is the language of 3.4 per cent. Hindus numbered 1,778,921 persons, or 91 per cent. of the total, and Animists 159,321, or 8 per cent.

Castes and
occupations

The most numerous castes are the Chāsas (220,000), Santāls (194,000), Pāns (177,000), Gaurs (150,000), Hos (99,000), Khandaits (86,000), Brāhmans (76,000), Khonds (71,000), Bhumij (67,000), Bhuiyās (55,000), Kurmīs (54,000), Telis (51,000), Bāthudis (44,000), and Sahars (41,000). The so-called Hindus include a large number of aboriginal and semi-aboriginal tribes. These are most numerous in the mountainous tracts of Mayūrbhanj, Keonjhar, and Baud. The majority, including the Santāls (*see* SANTĀL PARGANAS), Pāns, Hos, Khonds (*see* KHONDMĀLS), BHUMIJ, Savaras, and BHUIYĀS, are of so-called Dravidian stock. The Bāthudis and Sahars are of uncertain origin. The primitive leaf-wearing Juāngs, a small tribe found chiefly in Keonjhar and Dhenkānāl, deserve mention. The Chāsas, Gaurs, Khandaits, and Kurmīs are derived from various elements and seem to be mainly non-Aryan. Agriculture supports 70.6 per cent. of the population, industries 11.7 per cent., commerce 0.2 per cent., and the professions 1.2 per cent.

Christian
missions.

Small Christian missions are at work in Athgarh, Mayūrbhanj, and Nilgiri, the total number of Christians in 1901 being 950, of whom 917 were natives.

General
agricultural
conditions.

The Tributary States, consisting of a succession of hills and valleys, present every variety of soil and conformation of surface. The mountain-sides exhibit bare rocks or are covered only by a thin layer of earth, and extensive ridges of laterite or other hard soil support nothing but scrub growths. The intervening valleys hold rich deposits of clay, loam, and alluvium,

varying in thickness from a few inches to several feet, over a foundation of solid metamorphic rocks; the soil is enriched by mineral substances washed down from the disintegrated hills by the annual rains. The rainfall is adequate and well distributed, but the sloping nature of the country enables the numerous hill streams to drain off the rain-water quickly into the main rivers. The forests, where they exist, help to retain a certain amount of moisture; and perennial springs are also met with, though not to any great extent. Cultivation is confined to the valleys and to clearings on the hill slopes. The shifting method of cultivation, locally called *dahi*, has been pursued from time immemorial by the aboriginal tribes in the uplands of Mayūrbhanj, Pāl Laharā, and Keonjhar, and has practically denuded the valuable forests in these parts of all good timber. When preparing a clearing the large trees are ringed, and the smaller ones are removed by the hatchet and fire. The soil is then scratched with primitive hand-ploughs, bullocks being seldom used; and a fairly good miscellaneous crop, consisting of early rice, maize, millets, oilseeds, turmeric, &c., is raised for two or three seasons. The site is then abandoned for a fresh one and is allowed to rest until again covered with jungle, when the same process is repeated. The sloping nature of the country affords ample opportunity for cultivation in terraces, which can easily be irrigated from a tank or reservoir.

The staple crop is rice, of which three kinds are grown: Principal crops. *biāli* or early, *sārād* or winter, and *dālua* or spring. Advantage is taken of the early spring showers to prepare the land for the first two kinds, the former of which is grown on comparatively high land and the latter in hollows and on the lower levels. *Dālua* is cultivated to a limited extent along the edges of basins which remain wet throughout the year. The modes of cultivation are the same as in Orissa proper. As a food-crop, rice is supplemented by millets, such as *chīna*, *mandiā* or *maruā*, &c., and maize and pulses, including *bīrhi*, *mūng*, *kurthā*, *rahar*, and gram, which form a large part of the diet of the people. Cereals and oilseeds are grown on the high lands and slopes, the chief oilseeds being mustard, sesamum, and castor-oil; the last is sometimes used by the poorer classes for cooking. Sugar-cane is extensively cultivated, and the coarse sugar which is made from it is not only consumed locally, but is exported to Cuttack and elsewhere. Cotton is largely grown, chiefly for export. Tobacco is raised on the rich silt deposits of rivers and near homesteads, where cattle manure is

plentiful. Turmeric is extensively grown for export, and all the ordinary vegetables are cultivated, the commonest being the brinjāl or egg-plant and the pumpkin. The hills produce various tubers and edible roots, upon which the aborigines largely subsist. As a result of the growth of population within the States, of immigration from outside, and of improved communications, cultivation is steadily on the increase; extensive clearings are being made on all sides, and the problem in every State is how to devise measures for the proper conservation of the forests without unduly restricting the reclamation of waste lands. Each chief maintains a number of State granaries, which are replenished by rent payments and repayments of advances in kind and also from the produce of his private lands.

Cattle. Pasture lands are generally plentiful, and no difficulty is experienced in feeding cattle; during the dry season large numbers are brought up from the plains for grazing purposes. The local breeds of cattle are poor, and no attempt has been made to improve them.

Irrigation. There are no canals, but the cultivators often irrigate their fields from tanks and wells. It is a common practice to construct reservoirs for the storage of water by damming up streams, but this method of irrigation might be utilized much more widely than it is at present. Tanks and wells number about 12,000 each, and the area irrigated from them is roughly estimated at 512 square miles. For irrigating sugar-cane, vegetables, tobacco, &c., in the dry season, the people sink temporary wells in the sandy beds of streams, and lift the water by means of simple levers worked by one or two men.

Forests. The character of the forests is the same throughout the Tributary Mahāls. The hills in most of the States extend over a large area and are covered with vegetation, but the most valuable timber is found in the intervening narrow valleys. These forests were at one time among the best timber-producing tracts in India; but the chiefs have taken little care of them, and reckless exploitation and clearings for *dahi* cultivation have caused nearly all their valuable timber to disappear. Till lately forest conservancy was practically unknown; but the example of Mayūrbhanj and the British District of Angul, where the forests have been surveyed, 'reserved,' and brought under regular control, has induced the other States to follow suit, though in a crude and unmethodical way. There is very little good timber left in the vicinity of the Mahānadi and the Brāhmaṇī rivers, but elsewhere and farther inland the absence of

good roads and the difficulty of transport have saved them from wholesale destruction. The principal timber trees are *sāl* (*Shorea robusta*), *piāsāl* (*Pterocarpus Marsupium*), *sissū* (*Dalbergia Sissoo*), *karam* (*Adina cordifolia*), *bandhan* (*Ougeinia dalbergioides*), *gamhār* (*Gmelina arborea*), *tendu* or ebony (*Diospyros melanoxylon*), *mahuā* (*Bassia latifolia*), and *āsan* (*Terminalia tomentosa*). Among other common trees are the mango (*Mangifera indica*), tamarind (*Tamarindus indica*), *jām* (*Eugenia Jambolana*), jack (*Artocarpus integrifolia*), *amrā* or hog-plum (*Spondias mangifera*), *piār* (*Buchanania latifolia*), *haritaki* (*Terminalia Chebula*), *kuchila* (*Strychnos Nux-vomica*), *khair* (*Acacia Catechu*), *gundi* (*Mallotus philippinensis*), *baherā* (*Terminalia belerica*), *semul* or cotton-tree (*Bombax malabaricum*), *karanj* (*Galedupa indica*), *kusum* (*Schleichera trijuga*), banyan (*Ficus indica*), and *pīpal* (*Ficus religiosa*). The minor forest products are honey, beeswax, *tasar*, lac, a dye called *gundi*, and various medicinal drugs. *Sabai* grass (*Ischoemum angustifolium*) grows largely in Dhenkāl, Keonjhar, Mayūrbhanj, Nīlgiri, Pāl Laharā, Tālcher, and other States, and is used locally for the manufacture of ropes. Paper can also be made from it, and small quantities are now exported for use in the Bengal paper-mills. The area of forests in the Tributary States has not been ascertained, but the revenue from them in seventeen of the States in 1903-4 is reported to have amounted to 2.5 lakhs.

The TĀLCHER coal-field was last explored in 1875, when a Minerals. thorough examination was made by an officer of the Geological Survey, with no very favourable result. The bed extends to Angul, Athmallik, and Dhenkāl, having a total area of about 700 square miles; but the coal is of inferior quality. Limestone and sandstone suitable for building purposes are procurable in almost all the States. Iron has been found and worked from the earliest times; and a recent geological survey shows that the iron ores of Mayūrbhanj are of excellent quality. A scheme is now being developed for a railway to carry the latter to Sini in the Saraikelā State, where large iron- and steel-works will be constructed. Gold dust is washed to a small extent in Keonjhar, Dhenkāl, and Pāl Laharā. A kind of magnesian rock, intermediate in composition between potstone and serpentine, locally called *mugni*, is extensively quarried in Nīlgiri for the manufacture of dishes, plates, and bowls, which have a large sale. Dhenkāl and a few other States produce talc. Red and yellow ochre are found in Athmallik, Mayūrbhanj, and Nayāgarh.

Arts and
manufac-
tures.

In Barāmbā and Tigiriā *tasar* silk and cotton cloths of very fine texture and superior quality are made ; they find a ready sale in the local markets and are also exported. In Khandparā and Narsinghpur brass and bell-metal utensils are manufactured on a large scale ; but, since the opening of the railway in Orissa, the industry has suffered from outside competition. In Baud, Dhenkānāl, Daspallā, Khandparā, Mayūrbhanj, and Tālcher blacksmiths make, for local use, iron implements, such as axes, billhooks, crowbars, shovels, spades, sickles, and knives, some of which are very well turned out. At one time the States, like the rest of Orissa, possessed excellent workers in stone and wood, but very few are now met with. In Dhenkānāl and Nayāgarh ivory work of good quality is still made by one or two families.

Commerce.

Trade is carried on principally by itinerant dealers from the British Districts and by the ubiquitous Mārwarī and Kābuli. They take away rice, pulses, oilseeds, *tasar* cocoons, &c., and timber and other forest produce, in return for salt, dried fish, European cotton piece-goods, cotton twist, and kerosene oil. A considerable business in hides and horns is carried on by Muhammadans. Most of the trade is with Cuttack, but some also with Balasore and Purī. There are no markets of much importance ; KANTILO in Khandparā, ANANDPUR in Keonjhar, and BHUBAN and DHENKĀNĀL in Dhenkānāl are the principal local centres. The larger rivers are open to country boats for about eight months in the year, during which they are largely used for floating down rafts of timber and bamboos. But the greater part of the trade is carried on during the dry season when the rivers are low ; country carts are used where there are fair-weather roads, but elsewhere pack-bullocks still form the chief means of transport. Carts with small solid wheels are used for bringing down timber and stone from the forests, and for carrying other goods in places where only rough tracks exist.

Communi-
cations.

The Bengal-Nāgpur Railway passes in proximity to Ranpur, Nīlgiri, and Mayūrbhanj ; and Baripādā, the capital of the last State, has recently been connected with it by a branch line on the narrow gauge, 32 miles long. The most important roads are those from Cuttack to Sambalpur and to Sonpur, which are maintained by Government as fair-weather roads ; the former skirts the south, and the latter the north, bank of the Mahānadi. A new diversion of the second road, the greater portion of which is metalled, passes through Dhenkānāl and Angul. Branch roads lead from these main lines of com-

munication to all the States situated in the Mahānadi and Brāhmanī valleys. Mayūrbhanj is traversed by several excellent roads, some of which are metalled and bridged; and in Keonjhar two important roads have recently been made, one to the Balasore and the other to the Singhbhūm boundary. The Mahānadi and Brāhmanī form broad waterways during half the year, but there is no steamer or regular boat service on either of them. All the States except Tigiriā and Upper Keonjhar have subsidized British post offices, and the telegraph line to Angul passes through Dhenkānāl; there are also branch telegraph lines to Nilgiri and Baripādā.

The great Orissa famine of 1866 did not extend its ravages Famine. to the Tributary States, which have long been free from famine, though some of them have suffered from partial scarcity in recent years, e.g. in 1897 and 1900. The reason of this comparative immunity is to be found in the conformation of the country, which is less subject to devastating floods and which, owing to the presence of wooded hills, is better able to retain moisture than the plains. The natural facilities for irrigation are also better. The people do not depend entirely on the single crop of rice, but grow also other food-grains and a variety of crops. The fruit of the mango and jack and the flower of the *mahuā* tree, with which the forests and village sites abound, afford substantial relief in time of scarcity, and the jungles contain many edible roots and tubers.

The States have formed the subject of frequent legislation Adminis-
tration. of a special character. They were taken over from the Marāthās in 1803 with the rest of Orissa; but, as they had always been tributary states rather than regular districts of the native governments, they were exempted from the operation of the general regulation system, by sections 36, 13, and 11 of Regulations XII, XIII, and XIV of 1805. The exemption was allowed on the ground of expediency only; and it was held that there was nothing in the nature of British relations with the proprietors that would preclude their being brought under the ordinary jurisdiction of the British courts, if it should ever be thought advisable. The office of Superintendent of the Tributary States was established in 1814, and he was directed to endeavour to establish such control over the conduct of the *zamindārs* as might prevent the commission of crimes and outrages. The only law, however, under which he appears to have been formally invested with any judicial authority was Regulation XI of 1816, by which he was empowered to dispose of claims to inheritance and succession

among the Rājās. In 1821 the Government ruled that his interference should be chiefly confined to matters of a political nature; to the suppression of feuds and animosities prevailing between the Rājās of adjoining Mahāls, or between the members of their families, or with their subordinate feudatories; to the correction of systematic oppression and cruelty on the part of the Rājās or their officers; to the cognizance of any apparent gross violation by them of their duties of allegiance and subordination; and generally to important points, which might lead, if not attended to, to violent and general outrage and confusion or to contempt of the paramount authority of the British Government. Several local Acts were passed, such as Act XX of 1850, for settling boundary disputes. But the whole system was changed in consequence of a ruling of the Calcutta High Court in 1882, which held that the Tributary States did not form part of British India. After prolonged correspondence the decision was accepted as final by the Secretary of State, and a special Act, called the Tributary Mahāls of Orissa Act (XI of 1893), was passed to indemnify certain persons and to validate acts done by them in the Mahāls, and to admit of certain sentences passed there being carried into effect in British India. The relations between the British Government and the Tributary States are governed mainly by the *sanads* granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties, and obligations of the chiefs, providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Superintendent, who is also the Commissioner of the Orissa Division¹.

Except in Mayūrbhanj, which, under its present enlightened ruler, is governed on British lines, the States are administered by the chiefs in a more or less primitive fashion, generally with the help of a *dīvān*, who in many cases exercises full authority.

During the minority of a chief or in the rare case of his gross incapacity, the management of the State is undertaken by Government under the supervision of the Superintendent. Five States are thus now under Government management: namely, Narsinghpur, Dhenkānāl, Pāl Laharā, Nayāgarh, and Barāmbā.

Civil and
criminal
justice.

The chief of each State has his own court with civil and criminal powers, which he exercises himself or delegates to his

¹ Since the rearrangements of 1905, a separate officer has been appointed Political Agent for the Orissa States, who is subordinate to the Commissioner.

ḍiwān or manager. Under the terms of the *sanad* of 1894, he tries all criminal cases occurring in his territory, except those in which Europeans are concerned, and heinous offences, such as murder, homicide, dacoity, robbery, and torture, which he must commit to the Superintendent of the Tributary Mahāls, or to such of his assistants as the latter may direct. Sentences passed by the chiefs in criminal cases are regulated by the instructions issued from time to time by the Bengal Government, and, unless specially extended, may not exceed in the case of imprisonment a term of two years, in the case of fines a sum of Rs. 1,000, and in the case of whipping 30 stripes. In his criminal jurisdiction the Superintendent exercises the powers of a High Court in the Tributary States. In civil matters the chief has full authority, subject to the general control of the Superintendent. The three largest States have outlying subdivisions: namely, Mayūrbhanj two, Keonjhar two, and Dhenkānāl one. The subdivisional officers are vested with limited revenue, criminal, and civil powers.

Owing to the general absence of subinfeudation and of large estates, land disputes are simple and few in number, and civil litigation is practically confined to petty suits regarding bonds and small trade transactions. Various kinds of oaths are in vogue for eliciting the truth. Criminal cases consist mainly of burglaries and thefts; dacoities take place occasionally, and murders are by no means uncommon, but riots seldom occur. The people are on the whole truthful, peaceable, and law-abiding, the only exception being the Pāns, who, being landless and indolent, live from hand to mouth and furnish the greater part of the jail population. Some of the aboriginal tribes are impulsive and excitable; and there have been several instances of risings, the most notable of which are the Bhuiyā rebellions of 1862 and 1891 in Keonjhar, and the Khond rebellion of 1894 in Nayāgarh.

No reliable statistics of the income and expenditure of these States are available, except for Mayūrbhanj and the five States under Government management. Such figures as have been obtained will be noticed in the separate account of each State. The principal source of income is the land revenue, which is supplemented by excise, stamps, judicial fines, and licence fees from various minor monopolies. In some of the States the forests yield a handsome profit. The excise revenue consists of the licence fees from out-stills, and for *gānja* and opium shops; these are settled yearly on the basis of auction sales, but there is a general want of supervision and very little

is done to force up prices. Excisable articles are thus very cheap, and they are often smuggled into the adjoining British Districts. The chiefs formerly derived no revenue from *gānja*, which was allowed to grow wild ; but in 1896 they were induced to put a stop to its cultivation and to introduce the Rājshāhi drug, under an arrangement which has proved lucrative to themselves, while it has effectually suppressed *gānja* smuggling. Some of the States have introduced the stamp and court fee rules. Stamps are supplied to them at cost price. The fees charged are below the rates prevailing in British territory. The miscellaneous revenue of the States is derived from several minor sources, such as fines and fees, *salāmis* or *nazarānas*, and licence fees for the sale of various forest products. According to a time-honoured custom, large sums are levied as *māgan*, or voluntary contributions, on the occasion of the marriage, birth, or death of a chief, or of some near member of his family.

Land
revenue.

The land settlement is extremely simple, and approximates closely to the system which existed in the Districts of Orissa proper under the Hindu dynasties. The abstract ownership vests in the Rājā or hereditary chief, but the right of occupancy remains with the actual cultivator. So long as he pays his rent, his possession is undisturbed ; but alienation by sale, gift, or mortgage is subject to the permission of the chief. No intermediate rights in the soil exist, except in the case of service tenures and other beneficiary grants. The revenue assessed on the holding of each ryot is based on measurement by a standard pole and a rough classification of the soil, or on an approximate estimate of the produce of the land ; the assessment is generally revised every ten or fifteen years. Land revenue is collected through *sarbarāhkārs*, of whom there is one or more for each village. They are paid by commission ranging from 5 to 15 per cent., and in some cases have *jāgīr* lands besides. In some of the States the aboriginal races pay no revenue, but are assessed at a certain rate per house or per plough, which is subject to revision every three or five years. The revenue is supposed to bear some relation to out-turn, but the mode of calculation is often very crude. Formerly the whole or a part of the rent used to be realized in kind ; but this led to much oppression and discontent, and cash payments have, under pressure from Government, now become the rule. On an average the rate per acre of rice lands varies from Rs. 1-2 to Rs. 2, and for miscellaneous crops from 2 annas to R. 1. A ryot's holding does not ordinarily exceed 5 acres.

The police of the Tributary States consisted in 1903-4 of Police. 173 officers and 871 men. In Keonjhar and Mayūrbhanj European officers are in charge of the police force. The rural police is divided into two classes, *paiks* and *chaukidārs*, both remunerated by small *jāgīr* grants. The former are employed on guard and escort duties, and form an ornamental appendage to a chief's following. They are sometimes a source of danger by reason of their number and influence, which the chiefs are now trying to reduce. The *chaukidārs* are the rural police proper, and look after crime in the villages.

The States have their own jails in Barāmbā, Narsinghpur, Jails. Dhenkānāl, Daspallā, Mayūrbhanj, Tālcher, Keonjhar, Athmallik, and Athgarh; these are of masonry, but elsewhere they are merely mud huts within mud enclosures. They generally have sufficient accommodation, but are without proper sanitary arrangements. The prisoners are employed on extra-mural labour; discipline is badly enforced, and there is seldom any provision for exacting penal labour. Escapes are not uncommon. Long-term prisoners are sometimes sent to British jails, where the chiefs pay for their maintenance.

Education is very backward, but in late years there has been Education. steady progress, especially in primary education. Only 3.3 per cent. (6.4 males and 0.2 females) could read and write in 1901. The States of Dhenkānāl and Mayūrbhanj, which are the most advanced, maintain a large number of schools, including a high school. The number of pupils in all the States increased from 14,505 in 1883 to 17,176 in 1900-1. In 1903-4, 22,108 boys and 1,188 girls were at school, being respectively 15.1 and 0.8 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,356, of which 20 were secondary, 1,130 primary, and 206 special schools. The total expenditure was Rs. 1,20,000, of which Rs. 20,000 was paid by Government, Rs. 54,000 by the several States, and Rs. 43,000 was met from fees. No special institutions exist for the aboriginal races, but primary schools have been opened in a few of their central villages, where 2,705 boys were under instruction in 1904.

All the States except Tigiriā maintain dispensaries in charge Medical. of civil hospital assistants or, in two cases, of Assistant Surgeons. In Dhenkānāl a female hospital, under a qualified lady doctor, was opened in 1900-1. In all the States combined, 23 dispensaries gave medical aid in 1904 to 684 in-patients and 103,177 out-patients, at an expenditure of Rs. 29,000, including the cost of establishment and medicines. The

dispensaries are fairly well equipped, but they suffer from want of professional supervision. The people have not yet learnt to appreciate the European system of medical treatment, but in surgical cases they readily resort to the hospitals.

Vaccina-
tion

Inoculation has been stopped in the States, but vaccination has not yet been made compulsory, and is making very slow progress. Here, as in British Orissa, the people have strong prejudices against it, and so also have the chiefs, with the exception of the enlightened rulers of Mayurbhanj, Nilgiri, Hindol, and Athgarh, who have not hesitated to introduce vaccination in their own families. In 1903-4, in all the States (excluding Khandparā) 45,000 persons, or 23 per 1,000 of the population, were vaccinated. The work is generally carried on by paid or licensed operators under the supervision of the medical officer in charge of the State dispensary, and in some States sub-inspectors of vaccination have been appointed. A class has been opened in the Cuttack medical school, where each State sends one or more men annually to receive practical training in vaccination. The course lasts for six weeks, and the successful students are employed as vaccinators in their own States.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. xix, pp. 195-314 (1877).]

Athgarh.—One of the Tributary States of Orissa, Bengal, lying between 20° 26' and 20° 41' N. and 84° 32' and 85° 52' E., with an area of 168 square miles. It is bounded on the north by the State of Dhenkānāl; on the east and south by Cuttack District; and on the west by the States of Tigrinā and Dhenkānāl. The country is level, low-lying, and very subject to inundation. The soil is fertile, and the cultivation consists chiefly of rice, with an occasional crop of sugar-cane, pulses, and millets.

The founder of the State was Śrī Karan Nīladri Bawārta Patnaik, who belonged to the Karan caste. It is said that he was the Bawārta or minister of the Purī Rājā, who conferred on him the title of Rājā and gave him Athgarh as a reward for his services, or, according to another account, as a dowry on marrying the Rājā's sister. The present chief, Śrī Karan Biswanāth Bawārta Patnaik, is the thirteenth in descent. The State has an estimated revenue of Rs. 50,000, and pays a tribute of Rs. 2,800 to the British Government. The population increased from 36,603 in 1891 to 43,784 in 1901; of the latter number all but 2,643 were Hindus. The most numerous castes are the Chāsas (10,000), Sahars (6,000), and

Khandaits and Pāns (5,000 each). The average density is 260 persons per square mile. The number of villages is 192, of which the principal is Athgarh, the residence of the Rājā. A small Christian colony is settled in three hamlets near Chagān village. The State is traversed by the old high road from Cuttack to Sambalpur and by the newly opened Cuttack-Angul-Sambalpur road. The Mahānadi river, which runs along the southern boundary, is navigable by boats. There is some trade in grain, and fuel and charcoal are largely exported to Cuttack. The State maintains a charitable dispensary, a middle English school, an upper primary school, 75 lower primary schools, and one Sanskrit *col.*

Tālcher.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 52'$ and $21^{\circ} 18'$ N. and $84^{\circ} 54'$ and $85^{\circ} 16'$ E., with an area of 399 square miles. It is bounded on the north by the States of Bāmra and Pāl Laharā; on the east by Dhenkānāl; and on the south and west by Angul District. The Brāhmanī river traverses the State, and Tālcher village, which contains the Rājā's residence, is picturesquely situated on a bend on its right bank. The State contains a coal-field, of which a thorough examination was made in 1875. It was then reported that there is no seam of workable thickness and fairly good quality; that a final and thorough exploration could be effected only at a considerable expense; that the local consumption would never suffice to support a proper mining establishment; and that with the long and costly land carriage no class of coal equal to Rānīganj coal could compete successfully at the Orissa ports with coal sent from Calcutta by sea. The project for utilizing the Tālcher coal-beds has, therefore, been abandoned for the present. Iron and lime are also found near the banks of the Brāhmanī river, which separates Tālcher on the east from Pāl Laharā and Dhenkānāl. Small quantities of gold are obtained by washing the sand of the river, but little profit accrues to the workers.

The Rājā claims a Rājput origin and descent from the Jaipur ruling family. The State has an estimated revenue of Rs. 65,000, and pays a tribute of Rs. 1,040 to the British Government. The population increased from 52,674 in 1891 to 60,432 in 1901, distributed in 293 villages; and the density is 151 persons per square mile. All but 179 of the total were Hindus. The most numerous castes are the Chāsas (17,000) and Pāns (10,000). Tālcher village is connected by fair-weather roads with Pāl Laharā and Angul, and is an important mart. The State maintains a middle vernacular school, 2 upper

primary and 61 lower primary schools, and a charitable dispensary.

Mayūrbhanj.—The most northerly of the Tributary States of Orissa, Bengal, lying between $21^{\circ} 17'$ and $22^{\circ} 34'$ N. and $85^{\circ} 40'$ and $87^{\circ} 10'$ E. It is by far the largest of the Orissa States, and has an area of 4,243 square miles. It is bounded on the north by the Districts of Singhbhūm and Midnapore; on the east by Midnapore and Balasore; on the south by Balasore and the Nilgiri State; and on the west by Keonjhar.

Mayūrbhanj presents every variety of soil and scenery. A block of hills occupies an area of about 1,000 square miles in the centre of the State, and abounds in rich valleys and dense timber forests. This region is almost unexplored at present, but efforts are being made to open it out by roads. In the south the MEGHĀSANĪ hill attains a height of 3,824 feet above the sea. Large herds of elephants roam through the mountains and forests, and successful *khedda* operations are carried on from time to time.

It is related in native chronicles that the principality of Mayūrbhanj was founded about 1,300 years ago by a relative of the Rājā of Jaipur in Rājputāna. The family title is Bhanja ('breaker'), which, it is said, was assumed after the overthrow of a chieftain named Mayūradhwaj, an event which is also believed to account for the present name of the State. The chief's emblem is a peafowl (*mayūr*), and there is another tradition which alleges that his family originally sprang from a peafowl's eyes; the killing of this heraldic bird is strictly prohibited throughout the State. The remains of ruined temples, tanks, &c., at KHICHING, near Udaipur, indicate a condition of considerable prosperity in the past. The State came under British control with the conquest of Orissa in 1803, prior to which it had been feudatory to the Marāthās; and in 1829 a treaty engagement was entered into between the British and the Rājā.

The enumerated population rose from 258,680 in 1872 to 385,737 in 1881, 532,238 in 1891, and 610,383 in 1901. A great deal of this remarkable increase must be ascribed to the defective character of the earlier enumerations. During the last decade the growth amounted to 14·7 per cent., and in 1901 the density was 144 persons per square mile. The climate is on the whole fairly healthy, except in the hills and jungle tracts, which are very malarious. The inhabitants are contained in one town, BARIPĀDĀ (population, 5,613), and

3,593 villages, of which the most important are BAHALDA and KARANJIĀ, the head-quarters of the Bāmanghāti and Pāncpīr subdivisions. Hindus numbered 507,738, Animists 98,485, and Muhammadans 3,785. The majority of the people are of aboriginal origin; the most numerous castes are Santāls (185,000), Hos (68,000), Bhumij (56,000), Kurmīs (36,000), Bhuiyās (32,000), Gaurs and Bāthudis (30,000 each), Pāns (25,000), and Khandaits (15,000). A Baptist mission is at work at Baripādā and a Roman Catholic mission at Nāngalkāta, 8 miles from Baripādā on the Balasore road.

The people are almost entirely agricultural and lead an uneventful and contented life, so long as the harvests are good. About one-third of the State is under cultivation, and the remainder is either forest or waste. There is ample room for the extension of tillage, and large tracts are reclaimed each year under leases granted by the State. Rice is the staple crop; *rabi* crops and peas and pulses are cultivated along the river banks, and sugar-cane and tobacco are also grown. Experiments are being made in the growth of long-stapled cotton. Forest conservancy now forms an important branch of the administration, but the forests are suffering severely from the ruthless destruction of former times.

A geological survey of the State was recently undertaken, and it is reported that its iron ores are possibly the richest and most extensive in India. They occur in all parts of the State, but especially in Bāmanghāti, where there are a considerable number of smelters working with crude apparatus. It is proposed to construct a branch line to carry the ore to Sini on the Bengal-Nāgpur Railway, where large iron and steel works are to be built. Limestone in the shape of tufa or travertine is found in several localities, also red and yellow ochres; and the clays underlying the laterite near Baripādā constitute an excellent material for pottery. Gold is washed for in the Subarnarekhā river on the northern confines of Mayūrbhanj proper, and in the Kadkai and Bonai rivers in the Bāmanghāti subdivision; at the head-waters of the latter river there is a tract of about 2 square miles where almost the entire alluvium is auriferous, and separated from it by a low range of hills is another area of placer deposit of similar extent. In these two localities about 70 families obtain a livelihood by gold-washing, but they only scrape the surface soil; nuggets weighing as much as 2 or 3 *tolas* are said to be found occasionally. Mica occurs extensively in both the Mayūrbhanj and Bāmanghāti subdivisions, but the plates obtained are small; and agate,

flint, and jasper are found in some profusion in the latter subdivision.

The rearing of *tasar* cocoons and the cultivation of lac are extensively carried on, especially in Bāmanghāti. There is a considerable trade in forest produce, such as timber, lac, myrabolams, nux-vomica, honey, resin, and fuel. Horns and hides, rice, oilseeds, and cereals are also exported.

A narrow-gauge branch line connecting Baripādā town with Rupsā junction on the Bengal-Nāgpur Railway, a distance of 32 miles, was opened in 1905. The town is also connected by metalled roads with Bahalda and Karanjīā, the head-quarters of the outlying subdivisions, and with the towns of Balasore and Midnapore; and several fair-weather roads lead from it to other parts of the State.

The head-quarters are at BARIPĀDĀ town, which contains the residence of the chief and the seat of the administration. There are two outlying subdivisions, Bāmanghāti and Pānchpīr, with head-quarters at BAHALDA and KARANJIĀ respectively.

The administration of the State is conducted on British lines under the personal supervision of the chief, who has been vested with higher criminal powers than any of the other tributary chiefs, being empowered to pass sentences of imprisonment for five years. He is assisted by a Diwān and three Assistant Diwāns, and the judicial officers include a State Judge, a Subordinate Judge, and two Munsifs; of the latter the Subordinate Judge and one Munsif have the powers of a magistrate of the first class, while the other Munsif has second-class powers. The subdivisional officers are vested with limited revenue, criminal, and civil powers. The Educational department is controlled by a Superintendent, the Public Works department by a State Engineer, and the police and jails by a Superintendent; the 'reserved' forests are under the management of a Forest officer, while the 'protected forests' are under the revenue authorities. The State has a revenue of 9½ lakhs, the current land revenue demand being 7 lakhs; and the tribute payable to the British Government is Rs. 1,068.

The police force consists of 33 officers and 201 men, in charge of a European officer. A masonry jail has accommodation for 89 prisoners. Education has made rapid progress during the last twenty years, and in addition to a high school at Baripādā 284 schools of all kinds are scattered over the State. The State contains six dispensaries; the people are beginning to appreciate them, and the number of patients is gradually rising.

Bahalda.—Village in Mayūrbhanj, one of the Orissa Tributary States in Bengal, situated in $22^{\circ} 23' N.$ and $86^{\circ} 5' E.$ Population (1901), 1,724. Bahalda is the head-quarters of the Bāmanghāti subdivision of the State, and is connected with Baripādā, the capital, by a metalled road.

Bāmanghāti.—Northern subdivision of Mayūrbhanj, one of the Orissa Tributary States in Bengal, with head-quarters at BAHALDA. It was at one time under British management, supervised by the Deputy-Commissioner of Singhbhūm, but was restored to the direct control of the Rājā of Mayūrbhanj in 1878.

Baripādā.—Capital of Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in $21^{\circ} 56' N.$ and $86^{\circ} 44' E.$, on the Burhābalang river. Population (1901), 5,613. Baripādā is connected by a light railway (2 feet 6 inch gauge) with Rupsā junction on the Bengal-Nāgpur Railway, and by metalled roads with Bahalda and Karanjīā, the head-quarters of the Bāmanghāti and Pānchpīr subdivisions, and with the towns of Balasore and Midnapore; several fair-weather roads run from it to other parts of the State. It is the seat of the administration, and contains the residence of the chief, a good dispensary, and a high school, besides criminal and civil courts, and a jail.

Karanjīā.—Village in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in $21^{\circ} 44' N.$ and $86^{\circ} 6' E.$ Population (1901), 732. Karanjīā is the head-quarters of the Pānchpīr subdivision of the State, and is connected with Baripādā, the capital, by a metalled road.

Khiching.—Village in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in $21^{\circ} 55' N.$ and $85^{\circ} 50' E.$ Population (1901), 269. It contains archaeological remains, such as statues, pillars, mounds, and the ruins of several brick and stone temples. A group of temples adjoining the village is of great interest. One of the temples (to Siva) seems to have been repaired in the time of Mān Singh, Akbar's Hindu general, to whom another (unfinished) temple should probably be ascribed.

[*Archaeological Survey Reports*, vol. xiii, pp. 74–6.]

Meghāsani.—Mountain peak in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in $21^{\circ} 38' N.$ and $86^{\circ} 21' E.$ Its height is 3,824 feet; there is a plateau on the top of the hill.

Nilgiri State.—One of the Tributary States of Orissa, Bengal, lying between $21^{\circ} 17'$ and $21^{\circ} 37' N.$ and $86^{\circ} 25'$

and $86^{\circ} 50'$ E., with an area of 278 square miles. It is bounded on the north and west by the State of Mayūrbhanj, and on the east and south by Balasore District. One-third of the area is taken up by hills, some of which contain valuable timber. There is much land awaiting reclamation. Valuable quarries of black stone are worked, from which cups, bowls, platters, &c., are manufactured for export. Negotiations are in progress with a European firm for working the granite quarries in the State, and for connecting them by a light railway with the Bengal-Nāgpur Railway at Balasore. The origin of the State is obscure. According to tradition it was founded by an adventurer from Chotā Nāgpur. It came into prominence during the Mughal period, and one of the chiefs was handsomely rewarded for the assistance he rendered to Akbar's Hindu general, Mān Singh, in subduing the refractory Pathāns. The State has an estimated revenue of Rs. 1,37,000, and pays a tribute of Rs. 3,900 to the British Government. The population increased from 56,198 in 1891 to 66,460 in 1901. The number of villages is 466, and the density is 239 persons per square mile. The most important village is Nilgiri, containing the residence of the Rājā; this is picturesquely situated at the foot of a hill, 5 miles from the trunk road from Calcutta to Madras, with which it is connected by a good metalled road. Hindus numbered 58,896, Muhammadans 101, and Animists 7,302. The most numerous castes are the Khandaits (15,000), Bhumij (6,000), Brāhmans (5,000), and Gaurs and Hos (4,000 each). A small Christian community belonging to the American Free Baptist Mission is established at Mitrapur, 11 miles west of Balasore town. The State maintains one middle English school, 9 upper primary and 75 lower primary schools, and a dispensary.

Keonjhar State.—One of the Tributary States of Orissa, Bengal, lying between $21^{\circ} 1'$ and $22^{\circ} 10'$ N. and $85^{\circ} 11'$ and $86^{\circ} 22'$ E. It is the second largest of the Orissa States, having an area of 3,096 square miles. It is bounded on the north by Singhbhum District; on the east by the State of Mayūrbhanj and Balasore District; on the south by Cuttack District and the State of Dhenkānāl; and on the west by the States of Pāl Laharā and Bonai. Keonjhar is divided into two widely dissimilar tracts, Lower Keonjhar being a region of valleys and lowlands, while Upper Keonjhar includes the mountainous highlands. The latter consist of great clusters of rugged crags, which in troublous times afforded a safe retreat to its inhabitants. The mountain-tops appear from the lowlands to

be sharply ridged or peaked, but in reality they have extensive table-lands on their summits, fit both for pasture and for tillage. The Baitaranī river takes its rise in the hilly north-western division. The principal peaks are Gandhamādan (3,479 feet), Thākūrāni (3,003 feet), Tomāk (2,577 feet), and Bolat (1,818 feet).

Keonjhar originally formed part of Mayūrbhanj, but about 200 years ago the local tribes threw off their allegiance to that State and chose a brother of the Rājā as their king. Since that time thirty-six chiefs have ruled. The late chief rendered good service during the Mutiny of 1857, in recognition of which his tribute was reduced and he was made a Mahārājā. He died in 1861 without legitimate issue; and on Government nominating his natural son, the present chief, to the *gaddi*, a dispute arose as to the succession, culminating in an insurrection of the Bhuiyā and Juāng tribes, which was suppressed only with the aid of British troops. The hill tribes again rebelled in 1891 as a protest against the oppressions of the minister, and the aid of British troops had again to be invoked before the rising could be put down. The State has an estimated revenue of 3 lakhs, and pays a tribute of Rs. 1,710 to the British Government. The population increased from 248,101 in 1891 to 285,758 in 1901, but is still very sparse, the density in the latter year being only 92 persons per square mile. There is one town, KEONJHAR (4,532), and 1,937 villages, of which the most important is ANANDPUR, situated on the Baitaranī river. Of the total population, 246,585 were Hindus and 38,567 Animists, the most numerous castes being Pāns (31,000), Khandaits (29,000), Gaurs (28,000), Hos (24,000), Bhuiyās (20,000), Kurmīs (17,000), Gonds (16,000), Bāthudis (13,000), and Khonds (12,000). The old Midnapore-Sambalpur road runs through Keonjhar town, and a few metalled roads have been made in the neighbourhood of the same town. A new and important fair-weather road has lately been completed, connecting Keonjhar town with Bhadrakh station in Balasore on the Bengal-Nāgpur Railway (84 miles) on the one side, and on the other with Jaintgarh on the borders of Singhbhūm District (36 miles). For administrative purposes the State is divided into three subdivisions: namely, the head-quarters, Anandpur or Lower Keonjhar, and Chāmpeswar or Nuāgarh. The State maintains 2 middle English, 7 upper primary, and 84 lower primary schools, and 3 charitable dispensaries.

Anandpur.—Village in Keonjhar, one of the Tributary States

of Orissa, Bengal, situated in $21^{\circ} 13' N.$ and $86^{\circ} 7' E.$, on the left bank of the Baitarani river. Population (1901), 2,945. Anandpur is connected by a fair-weather road with Keonjhar town and also with Bhadrakh station on the Bengal-Nāgpur Railway. A considerable trade is carried on, the rural and forest produce brought by land from the south-west being bartered for salt carried by boats from the coast.

Keonjhar Town (or Nijgarh).—Capital of the Orissa Tributary State of the same name, Bengal, situated in $21^{\circ} 38' N.$ and $85^{\circ} 36' E.$, on the Midnapore-Sambalpur road. Population (1901), 4,532.

Pāl Laharā.—One of the Tributary States of Orissa, Bengal, lying between $21^{\circ} 9'$ and $21^{\circ} 41' N.$ and $85^{\circ} 0'$ and $85^{\circ} 24' E.$, with an area of 452 square miles. It is bounded on the north by the State of Bonai; on the east by Keonjhar; on the south by Tālcher; and on the west by Bāmra. The east and north of the State are occupied by hills. A magnificent mountain, MALAYAGIRI (3,895 feet), the loftiest peak in the Orissa States, towers above the lesser ranges. The agricultural products consist of the usual coarse grains and oilseeds. Nothing worthy of the name of trade is carried on. There is some excellent *sāl* (*Shorea robusta*) in the northern hills, but no means of conveying it to a market.

Pāl Laharā was formerly feudatory to Keonjhar, and its chief still pays a tribute or quit-rent into the office of the Superintendent of the Tributary Mahāls, where it is placed to the credit of Keonjhar. The State has a revenue of Rs. 29,000, and its tribute payable to Government is Rs. 267. The population increased from 19,700 in 1891 to 22,351 in 1901, distributed among 265 villages. The density is 49 persons per square mile, or less than in any other of the Orissa States. Hindus numbered 20,770, Animists 1,540, and Muhammadans 41, the most numerous castes being Chāsas (5,000) and Pāns (4,000). The leaf-wearing Juāngs are still met with in the outskirts of the Malayagiri range. The old Midnapore-Sambalpur road passes through the north of the State. The village containing the Rājā's residence is connected with Tālcher and Angul by a fair-weather road of recent construction. The State maintains an upper primary and seven lower primary schools, and a dispensary.

Malayagiri.—The highest peak in Orissa, Bengal, situated in the Pāl Laharā Tributary State, in $21^{\circ} 22' N.$ and $85^{\circ} 16' E.$ The hill, which is 3,895 feet above the sea, is isolated and commands a magnificent view over the surrounding country.

Water is obtainable near the summit, on which there is space for building sites.

Dhenkānāl State.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 31'$ and $21^{\circ} 11'$ N. and $85^{\circ} 10'$ and $86^{\circ} 2'$ E., with an area of 1,463 square miles. It is bounded on the north by the States of Pāl Laharā and Keonjhar; on the east by Cuttack District and the State of Athgarh; on the south by Athgarh, Tigiriā, and Hindol; and on the west by Angul District and the States of Tālcher and Pāl Laharā. The Brāhmanī river, after forming the boundary between Dhenkānāl and Tālcher for a considerable distance, runs from west to east through the State along a richly cultivated valley and affords a waterway for trade. The State is said to derive its name from an aborigine named Dhenkā, who was in possession of a small strip of land, the site of the present palace; according to the story, he was killed in a nullah or hill stream by a scion of the Khurdā family, who founded the Dhenkānāl Rāj in the middle of the seventeenth century. The State was soon extended by conquests from the neighbouring chiefs, the largest acquisitions being made during the time of Trilochan Mahendra Bahādur (1756–98). The present chief's grandfather, Bhagīrath Mahendra Bahādur, was an enlightened ruler and was made a Mahārājā in 1869. Dhenkānāl is now third in importance among the Tributary States of Orissa. It is divided for administrative purposes into the head-quarters and the Baisingha subdivisions, the Brāhmanī river forming the dividing line. It yields a revenue of 2.19 lakhs, and pays a tribute of Rs. 5,099 to the British Government. The population increased from 238,285 in 1891 to 273,662 in 1901; of these, 265,750 were Hindus and 7,132 Animists. The most numerous castes are Chāsas (51,000), Pāns (46,000), Sahars (21,000), Gaurs (18,000), and Khandaits (16,000). The population is contained in two towns, DHENKĀNĀL (population, 5,609), the head-quarters, and BHUBAN (6,788); and 968 villages. The density is 187 persons per square mile. Iron is plentiful, but is worked only on a small scale. Trade in timber, rice, oilseeds, and cereals is carried on by boats, pack-bullocks, and bullock-carts. Weekly markets are held in several places. Dhenkānāl is well provided with roads, one of them being the Cuttack-Angul-Sambalpur road, which is metalled and bridged for a considerable distance. The State maintains a well-organized charitable dispensary, in charge of an assistant surgeon, and a Lady Dufferin hospital at the capital, besides a dispensary in the Baisingha subdivision. It

also keeps up a high school, in addition to 13 upper primary and 218 lower primary schools.

Bhuban.—Town in Dhenkānāl, one of the Orissa Tributary States, Bengal, situated in $20^{\circ} 53' N.$ and $85^{\circ} 50' E.$, on the north bank of the Brāhmanī river, about 14 miles from Jenāpur station on the Bengal-Nāgpur Railway. Population (1901), 6,788. Bhuban has a local reputation for its manufacture of bell-metal ware.

Dhenkānāl Town (or Nijgarh).—Capital of the Orissa Tributary State of the same name, Bengal, situated in $20^{\circ} 40' N.$ and $85^{\circ} 36' E.$ Population (1901), 5,609. The town contains the residence of the Rājā and other public buildings.

Athmallik.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 37'$ and $21^{\circ} 5' N.$ and $84^{\circ} 16'$ and $84^{\circ} 48' E.$, with an area of 730 square miles. It is bounded on the north by the State of Rairākhōl; on the east by Angul District, on the south by the Mahānadī river, which separates it from Baud; and on the west by Sonpur and Rairākhōl. The country is for the most part covered with dense jungle, and a long range of forest-clad hills runs along its southern side parallel with the course of the Mahānadī. The origin of the State is obscure. According to tradition, the founder of the family, Pratāp Deo, came to Purī and quarrelled with the Rājā, who put to death two of his seven brothers. The survivors fled to Bonai, and established themselves there. Pratāp Deo next proceeded to Baud and thence to Athmallik, of which he took possession after killing the Dom chief. Official records, however, show that till lately the State had no separate existence, and in the treaty engagement of 1804 it is mentioned as a tributary of Baud. It was treated as a separate State in the *sanad* granted to the chief in 1894, the terms of which were identical with those contained in the *sanads* of the other Orissa chiefs. The State has an estimated revenue of Rs. 71,000, and pays a tribute of Rs. 480 to the British Government. The population increased from 31,605 in 1891 to 40,753 in 1901, part of the gain being due to immigration from Baud and the Central Provinces. A great extension of cultivation has taken place in recent years, and the population is now nearly double what it was in 1881; but Athmallik is still, with the exception of Pāl Laharā, the most sparsely populated of all the Orissa States, the density being only 56 persons per square mile. Of the total population, all but 100 were Hindus. The most numerous castes are Chāsas (8,000), Gaurs (6,000), and Gonds, Pāns, and Sudhās (4,000 each). There are 460 villages, the

principal being Kaintira, the residence of the chief. The trade in timber, rice, and oilseeds is carried on pack-bullocks and by boats. The forests contain good timber, but they have not been systematically worked. The State maintains one middle English school, one upper school, and 32 lower primary schools, and a charitable dispensary.

Kaintira.—Village in Athmallik, one of the Orissa Tributary States, Bengal, situated in $20^{\circ} 43' N.$ and $84^{\circ} 32' E.$, on the north bank of the Mahānadi. Population (1901), 1,567. Kaintira is the principal village in the State and contains the residence of the chief.

Hindol.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 29'$ and $20^{\circ} 49' N.$ and $85^{\circ} 6'$ and $85^{\circ} 30' E.$, with an area of 312 square miles. It is bounded on the north and east by the State of Dhenkānāl; on the south by Barāmbā and Narsinghpur; and on the west by Angul District. Hindol consisted originally of three or four petty States completely buried in jungle, till two brothers, belonging to the family of the Kimedi Rājā in Madras, drove out the old chiefs and formed their territories into one principality. The State has an estimated revenue of Rs. 70,000, and pays a tribute of Rs. 551 to the British Government. The population increased from 37,973 in 1891 to 47,180 in 1901, part of the growth being due to an accession of new settlers. The number of villages is 234, one of which, Hindol, is the residence of the chief; the density is 151 persons per square mile. Of the total population, all but 200 were Hīndus. The most numerous castes are Chāsas (11,000) and Pāns (7,000). The old Cuttack-Sambalpur high road runs through the State in a south-easterly direction, and small quantities of country produce are thus brought to the Mahānadi and there sold to travelling merchants. A branch road, $7\frac{1}{2}$ miles in length, connects the main road with the village containing the Rājā's residence. Excellent oranges are grown in the Rājā's gardens, and the soil generally appears to be well suited for the cultivation of this valuable fruit. The State maintains one middle English school, 3 upper primary, and 57 lower primary schools, and a charitable dispensary.

Narsinghpur.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 23'$ and $20^{\circ} 37' N.$ and $84^{\circ} 5'$ and $85^{\circ} 17' E.$, with an area of 199 square miles. It is bounded on the north by a range of forest-clad mountains, which separate it from Angul District and the State of Hindol; on the east by Barāmbā; on the south and south-west by the Mahānadi river,

which divides it from Khandparā and Daspallā; and on the west by Daspallā and Angul District. The State is reputed to have been founded 600 years ago by a Rājput, named Dharma Singh, who conquered two Khond chiefs named Narsingh and Poro. It has a revenue of Rs. 66,000, and pays a tribute of Rs. 1,450 to the British Government. The population increased from 33,849 in 1891 to 39,613 in 1901, the density being 199 persons per square mile. It contains 198 villages, the most important of which is KĀNPUR. Of the total population, all but 150 were Hindus. The most numerous castes are Chāsas (6,000) and Pāns (4,000). Narsinghpur is connected with Barāmbā by a road which is a continuation of that from Sankarpur in Dhenkānāl. Another road leads to Angul, and one to Hindol is under construction. The State maintains a middle vernacular, an upper primary, and 36 lower primary schools, and a charitable dispensary.

Kānpur.—Principal village in Narsinghpur, one of the Orissa Tributary States, Bengal, situated in 20° 24' N. and 85° 11' E., on the Mahānadī. Population (1901), 1,727. Kānpur has a bi-weekly market, and a trade in grain, cotton, oilseeds, and sugar-cane.

Barāmbā.—One of the Tributary States of Orissa, Bengal, lying between 20° 21' and 20° 31' N. and 85° 12' and 85° 31' E., with an area of 134 square miles. It is bounded on the north by Hindol; on the east by Tigiriā; on the south by Cuttack District and Khandparā, the boundary line being formed by the Mahānadī river; and on the west by Narsinghpur. Kanakā Peak (2,038 feet), the highest point of a hill range of the same name, is situated on the northern border. A legend attributes the foundation of the State to a celebrated wrestler, to whom the Orissa monarch presented two villages which were owned and inhabited by Khonds; the wrestler speedily drove out the aborigines and then extended his territory, which received further accessions in the time of his successors. The State yields a revenue of Rs. 43,000, and pays a tribute of Rs. 1,398 to the British Government. The population increased from 32,526 in 1891 to 38,260 in 1901, of whom 37,441 were Hindus. A few Buddhists are still found in one or two villages. The most numerous castes are Chāsas (11,000) and Pāns (4,000). The population reside in 181 villages, and the density is 285 persons per square mile. The Mahānadī affords excellent water-carriage, and logs of timber and bamboos are floated down the river to Cuttack and Purī Districts. A good fair-weather road connects Bar-

āmbā with Narsinghpur on one side and Tīgiriā on the other, joining the old Cuttack-Sambalpur road above Sankarpur in Dhenkānāl. Excellent cotton and silk cloth are manufactured at the village of Māniābundha. The State maintains a middle vernacular school, 2 upper primary and 44 lower primary schools, and a charitable dispensary.

Tīgiriā.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 24'$ and $20^{\circ} 32'$ N. and $85^{\circ} 26'$ and $85^{\circ} 35'$ E. It is the smallest of the Orissa States, having an area of only 46 square miles. It is bounded on the north by the State of Dhenkānāl; on the east by Athgarh; on the south by the Mahānadī river; and on the west by Barāmbā. The State is alleged to have been founded about 400 years ago by one Nityānanda Tunga, who is said to have come from the west on a pilgrimage to Purī and to have been directed to the spot by a dream. The name Tīgiriā is apparently a corruption of *Trigiri* or 'three hills.' The State has an estimated revenue of Rs. 10,000, and pays a tribute of Rs. 882 to the British Government. The population increased from 20,546 in 1891 to 22,625 in 1901. The number of villages is 102. Tīgiriā, though the smallest, is the most densely peopled of the Orissa States, supporting as many as 492 persons per square mile. Hindus numbered 22,184. The most numerous caste is the Chāsa (7,000). The State is well cultivated, except among the hills and jungles at its northern end. It produces coarse rice and other food-grains, oilseeds, sugar-cane, tobacco, cotton, &c., for the transport of which the Mahānadī affords ample facilities. Bi-weekly markets are held at two villages. Cotton cloth of superior quality is made in the State and largely exported. The road to Barāmbā and Narsinghpur passes within half a mile of the village containing the Rājā's residence. The State maintains an upper and 27 lower primary schools.

Khandparā.—One of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 11'$ and $20^{\circ} 25'$ N. and $85^{\circ} 0'$ and $85^{\circ} 22'$ E., with an area of 244 square miles. It is bounded on the north by the Mahānadī river, which separates it from the States of Narsinghpur and Barāmbā; on the east by Cuttack and Purī Districts; on the south by Purī and the State of Nayāgarh; and on the west by Daspallā State. The State originally formed part of Nayāgarh, and was separated from it about 200 years ago by a brother of the Nayāgarh Rājā, who established his independence. The State has an estimated revenue of Rs. 30,000, and pays a tribute of Rs. 4,212 to the British Government. The land is very fertile, and the State is

one of the best cultivated in Orissa. Fine *sāl* timber (*Shorea robusta*) abounds in the hilly tracts, and magnificent banyan and mango trees stud the plain. It is intersected by the Kuariā and Dauka rivers, small tributaries of the Mahānadī. The population increased from 63,287 in 1891 to 69,450 in 1901. The number of villages is 325, of which the most important is KANTILO, a large mart on the Mahānadī. The density is 284 persons per square mile. The State maintains a middle vernacular school, 30 lower primary schools, and a charitable dispensary.

Kantilo.—Village in Khandparā, one of the Orissa Tributary States, Bengal, situated in $20^{\circ} 22' N.$ and $85^{\circ} 12' E.$, on the right bank of the Mahānadī, and on the Cuttack-Sonpur road, 7 miles from the Rājā's residence. Population (1901), 4,719. It is a considerable seat of trade, but has somewhat declined in importance since the opening of the Bengal-Nāgpur Railway. The manufacture of brass-ware is largely carried on.

Nayāgarh State.—One of the Tributary States of Orissa, Bengal, lying between $19^{\circ} 53'$ and $20^{\circ} 20' N.$ and $84^{\circ} 48'$ and $85^{\circ} 15' E.$, with an area of 588 square miles. It is bounded on the north by the State of Khandparā and Purī District; on the east by Ranpur; on the south by Purī District; and on the west by Daspallā and the Madras District of Ganjām. The State is a fine property and capable of great development. It abounds in noble scenery; and a splendid range of hills, varying from 2,000 to 3,000 feet in height, runs through its centre. It exports rice, cotton, sugar-cane, and several kinds of oilseeds and cereals to the neighbouring Districts of Cuttack, Purī, and Ganjām. Towards the south and south-east the country is exceedingly wild and hilly, and is inhabited by turbulent Khonds, who are sometimes a source of terror to their more peaceful neighbours. In 1894 they revolted against the chief, and committed many murders and other outrages, but were put down with the aid of the Government military police. The State is alleged to have been founded about 500 years ago by a scion of the ruling family of Rewah in Central India. Khandparā, which was originally part of Nayāgarh, became independent about 200 years ago. Nayāgarh has a revenue of Rs. 1,20,000, and pays a tribute of Rs. 5,525 to the British Government. The population increased from 117,826 in 1891 to 140,779 in 1901, when the density was 239 persons per square mile. The State contains 775 villages, the principal being NAYĀGARH, which contains the residence of the Rājā

and is connected by road with Khurdā in Purī District. Hindus numbered 133,995; Animists, 6,190, and Muhammadans, 585. The most numerous castes are the Chāsas (41,000), Pāns (13,000), Gaurs (11,000), and Brāhmans and Khonds (10,000 each). The State maintains a middle English school, 3 upper primary and 48 lower primary schools, and a dispensary.

Nayāgarh Village.—Capital of the Orissa Tributary State of the same name, Bengal, situated in 20° 8' N. and 85° 6' E. Population (1901), 3,340. The village contains the residence of the Rājā and is connected by road with Khurdā in Purī District.

Rānpur.—One of the Tributary States of Orissa, Bengal, lying between 19° 54' and 20° 12' N. and 85° 8' and 85° 28' E., with an area of 203 square miles. It is bounded on the north, east, and south by Purī District, and on the west by the State of Nayāgarh. The south-west is a region of forest-clad and almost entirely uninhabited hills, which wall in its whole western side, except at a single point, where a pass leads into the adjoining State of Nayāgarh. To the north and east there are extensive fertile and populous valleys. The State claims to be the most ancient of all the Orissa Tributary States, and its long list of chiefs covers a period of over 3,600 years. It is the only State whose ruler refrains from pretensions to an Aryan ancestry; and in 1814, in response to an inquiry addressed to all the chiefs, the Rājā was not ashamed to own his Khond origin. The State yields an estimated revenue of Rs. 54,000, and pays a tribute of Rs. 1,401 to the British Government. The population increased from 40,115 in 1891 to 46,075 in 1901. The number of villages is 261, and the density is 227 persons per square mile. Hindus numbered 45,762, by far the most numerous caste being the Chāsas (14,000). The capital of the State is 14 miles from the Kalupāra Ghāt station of the East Coast section of the Bengal-Nāgpur Railway, and about 10 miles from the Madras trunk road, with which it is connected by a feeder road partly bridged and metalled. The State maintains a middle English school, 3 upper primary and 38 lower primary schools, and a dispensary.

Daspallā.—One of the Tributary States of Orissa, Bengal, lying between 20° 11' and 20° 35' N. and 84° 29' and 85° 7' E., with an area of 568 square miles. It is bounded on the north by Angul District and the State of Narsinghpur, from the latter of which it is separated by the Mahānadi river; on the east by Khandparā and Nayāgarh; on the south by the Madras District of Ganjām; and on the west by Baud. Daspallā,

especially on the west and south, is covered with hills containing much timber. The principal peak is Goāldes (2,506 feet). The Mahānadī river, flowing through the picturesque Barmūl gorge in the north-west corner of the State, constitutes an excellent waterway. Daspallā is said to have been founded about 500 years ago by a son of the Rājā of Baud, and consisted originally of two small grants made by the Rājās of Nayāgarh and Khandparā; it was subsequently extended by the gradual absorption of neighbouring Khond villages. It is divided into two parts: Daspallā proper, lying south of the Mahānadī, the original principality; and Joremuha, a small tract north of the Mahānadī, which was an acquisition from Angul. The chief is commonly known as the Rājā of Joremuha-Daspallā. No tribute is paid for Joremuha, by virtue of a concession granted by the Marāthās in consideration of the Rājā supplying, free of all cost, all the timber annually required for the Jagannāth cars at Purī. At the Barmūl gorge the Marāthās made their unsuccessful stand against the British in 1804. The State has an estimated revenue of Rs. 70,000, and pays a tribute of Rs. 661 to the British Government. The population increased from 45,597 in 1891 to 51,987 in 1901, of whom 51,903 were Hindus, the most numerous castes being the Khonds (12,000), Pāns (8,000), Chāsas (7,000), and Gaurs (5,000). The density is 92 persons per square mile. The number of villages is 485, of which the chief is Kunjaban, the capital of the State, situated 14 miles from the Cuttack-Sonpur road. The State maintains a middle English school, 2 upper primary and 30 lower primary schools, and a charitable dispensary.

Baud State.—The most westerly of the Tributary States of Orissa, Bengal, lying between $20^{\circ} 13'$ and $20^{\circ} 53'$ N. and $83^{\circ} 35'$ and $84^{\circ} 48'$ E., with an area of 1,264 square miles. It is bounded on the north by the Mahānadī river, separating it from Sonpur and Athmallik; on the east by Daspallā; on the south by the Khondmāls; and on the west by Patnā and Sonpur, from which it is separated by the Tel river.

The State is one of the oldest in Orissa, and is said to have been originally founded by a Brāhman, but he being childless adopted a nephew of the Rājā of Keonjhar, who is regarded as the founder of the present family. The list of chiefs contains forty-five names, who are said to have ruled for nearly 1,400 years. The State was formerly of considerable extent, but from time to time portions were wrested from it by more powerful neighbours, and Athmallik, which was for centuries

part of Baud and acknowledged its suzerainty, is now quite separate. The large tract known as the KHONDMĀLS, with an area of about 800 square miles, which originally belonged to Baud, was made over to the British Government in 1835 by the chief, who was unable to control the Khonds or to put a stop to their human sacrifices; and it was in 1891 formed into a subdivision of Angul District. The State as now constituted yields an estimated revenue of Rs. 64,000, and pays to the British Government a tribute of Rs. 800. The population decreased from 89,551 in 1891 to 88,250 in 1901. The falling off is due, as in the case of the Khondmāls, partly to the prevalence of epidemic disease and the general unhealthiness of the climate, and partly to the emigration of many migratory Khonds during the scarcity which occurred in 1900. The number of villages is 1,070, and the density is 70 persons per square mile. Of the total population, 87,988 claimed to be Hindus, but many of them are really Hinduized aborigines. The most numerous castes are the Gaurs (23,000), Khonds (15,000), Pāns (9,000), Sudhās (7,000), and Chāsas (4,000). The Khonds (*see* KHONDMĀLS) are giving up their primitive customs and beliefs, and endeavouring to amalgamate with their Hindu neighbours. The land is fertile and is well provided with wells, reservoirs, and other sources of irrigation. The Mahānadi, which forms the northern boundary of the State, and the Tel, which borders it on its west, afford excellent facilities for water-carriage; and rice, oilseeds, and such cereals as are produced in the State are exported in large quantities by boat down the Mahānadi. The State maintains a middle English school, 4 upper primary and 16 lower primary schools, and a charitable dispensary.

Baud Village.—Capital of the Orissa Tributary State of the same name, Bengal, situated in $20^{\circ} 50'$ N. and $84^{\circ} 23'$ E., on the right bank of the Mahānadi. Population (1901), 3,292. The village contains several ancient temples. The most important are the Nabagraha temple, built of red sandstone, very profusely carved, and probably dating from the ninth century; and three temples of Siva with elaborately carved interiors.

[*Archaeological Survey Reports*, vol. xiii, pp. 118–9.]

Gāngpur.—One of the Tributary States of Orissa, Bengal, lying between $21^{\circ} 47'$ and $22^{\circ} 32'$ N. and $83^{\circ} 33'$ and $85^{\circ} 11'$ E., with an area of 2,492¹ square miles. It is bounded on the

¹ This figure, which differs from the area shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

north by the State of Jashpur and Rānchī District; on the east by Singhbhūm; on the south by the States of Bonai, Sambalpur, and Bāmra; and on the west by the State of Raigarh in the Central Provinces. Gāngpur consists of a long undulating table-land about 700 feet above the sea, dotted here and there with hill ranges and isolated peaks which rise to a height of 2,240 feet. In the north the descent from the higher plateau of Chotā Nāgpur is gradual; but on the south the Mahāvira range springs abruptly from the plain in an irregular wall of tilted and disrupted rock with two flanking peaks, forming the boundary between Gāngpur and the State of Bāmra. The principal rivers are the Ib, which enters the State from Jashpur and passes through it from north to south to join the Mahānadī in Sambalpur, the Sānkh from Rānchī, and the South Koel from Singhbhūm. The two latter meet in the east of Gāngpur, and the united stream, under the name of the Brāhmanī, flows south into the plains of Orissa. The confluence of the Koel and Sankh is one of the prettiest spots in Gāngpur; and it is said by local tradition to be the scene of the amour of the sage Parāsara with the fisherman's daughter Matsya Gandhā, the offspring of which was Vyāsa, the reputed compiler of the Vedas and the Mahābhārata. These rivers are practically dry from the end of the cold season till the rains, and there is no systematic navigation on them. Tigers, leopards, wolves, hyenas, bison, and many kinds of deer abound, and peafowl are numerous.

The State was once under the suzerainty of Sambalpur, which formed part of the dominions of the Marāthā Rājās of Nāgpur. It was ceded in 1803 to the British Government by the Treaty of Deogaon, but was restored to the Marāthā Rājā in 1806. It reverted under the provisional engagement with Mādhuji Bhonsla in 1818, and was finally ceded in 1826. In 1821 the feudal supremacy of Sambalpur over Gāngpur was cancelled by the British Government, and a fresh *sanad* granted to the chief. In 1827, after the permanent cession, another *sanad* was granted for a period of five years, but this was allowed to run till 1875 before it was renewed. The last *sanad* was granted to the chief in 1899. The State was transferred from Chotā Nāgpur to Orissa in 1905.

The total revenue is Rs. 2,40,000, and the tribute payable to the British Government is Rs. 1,250. The relations of the chief with the British Government are regulated by the *sanad* granted in 1899, which was reissued in 1905 with a few verbal changes due to the transfer of the State to Orissa. Under this

sanad the chief was formally recognized and permitted to administer his territory subject to prescribed conditions, and the tribute was fixed for a further period of twenty years, at the end of which it is liable to revision. The chief is under the general control of the Commissioner of Orissa, who is Superintendent of the Tributary Mahāls, as regards all important matters of administration, including the settlement and collection of land revenue, the imposition of taxes, the administration of justice, arrangements connected with excise, salt, and opium, and disputes in which other States are concerned; and he cannot levy import and export duties or transit dues, unless they are especially authorized by the Lieutenant-Governor. He is permitted to levy rents and certain other customary dues from his subjects, and is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200; but sentences of imprisonment for more than two years and of fine exceeding Rs. 50 require the confirmation of the Commissioner.

The recorded population increased from 191,440 in 1891 to 238,896 in 1901, the development being due partly to a more accurate enumeration and partly to the State having been opened out by the Bengal-Nāgpur Railway, which runs through the south-east corner for about 70 miles. The number of villages is 806, one of which, *SUĀDI*, contains the residence of the Rājā. The density is 96 persons per square mile. Hindus numbered 146,549, Animists 88,949, Muhammadans 1,640, and Christians 1,758. The most numerous tribes are the Oraons (47,000), Gonds (37,000), Khariās (26,000), Bhuiyās (24,000), and Mundās (19,000). The Agariās (7,000), a cultivating caste, claim to be descendants of Kshatriya immigrants from Agra. A branch of the German Evangelical Mission, with its head-quarters at Kumārkelā, has been at work since 1899 and has made several converts. The Roman Catholic Jesuit Mission established in the Biru *pargana* of Rānchī claims many converts in the State, chiefly among the Oraons.

The soil of the Ib valley towards the south is extremely productive, and here the skilful and industrious Agariās make the most of their land; in the north the soil is less fertile, and the cultivators are ignorant and lazy. The principal crops are rice, sugar-cane, and oilseeds. Irrigation from rivers and streams is extensively resorted to, but large works are not numerous. The estates of Hingir and Nāgra and certain portions of the *kṛhālsa*, or chief's own domain, contain stretches of *sāl* (*Shorea robusta*), which have been worked since the

opening of the Bengal-Nāgpur line through the State. The chief jungle products are lac, resin, and catechu. The forests also contain a large number of edible roots and indigenous drugs. *Sabai* grass (*Ischaemum angustifolium*) grows plentifully throughout the State and is exported in large quantities. Diamonds have occasionally been found in the sands of the Ib river, and gold-washing is carried on in most of the rivers and streams by Jhorā Gonds, who thus gain a precarious livelihood. An extensive coal-field is situated in the Hingīr estate, and negotiations for its working are now in progress. Limestone and iron occur throughout the State in great abundance, especially in the north-east, where a concession of 100 square miles has been made to a European prospector; the industry is developing rapidly and promises to be important. Work has also been commenced in the dolomite deposit in the same concession, where the stone procurable is said to be extremely rich and extensive. Villages in Gāngpur are held either on feudal tenures or on farming leases. The feudal tenures date back to the early times when the vassals of the chief received grants of land in consideration of rendering military service and making certain payments in kind. These payments and the service conditions also have been gradually commuted to a quit-rent in money. The other villages are leased out to small farmers, called *gāontīās* or *ganjhus*, who pay a fixed annual rent and are remunerated by lands, called *bogrā*, which are held rent free. Rents are paid only for rice lands, but the cultivators are bound to work gratuitously for the chief in return for the uplands which they hold rent free. The police force was reorganized in 1900, and is now managed by the chief's eldest son as District Superintendent on the lines followed in British Districts. The State contains altogether 13 police stations and outposts, and the force consists of 24 officers and 134 constables, maintained at a cost of Rs. 20,000; there is in addition a *chaukidār* in each village, who is remunerated by a grant of land. The State jail at Suādi has accommodation for 50 prisoners, and there is a dispensary at the same place, at which in- and out-patients are treated. The State maintains a middle English school, and 7 upper primary and 8 lower primary schools.

Suādi.—Capital of Gāngpur State, Bengal, situated in 22° 8' N. and 84° 2' E., on the Ib river. Population (1901), 2,185. Suādi contains the residence of the chief, a court-house, a jail with accommodation for 50 prisoners, a school, and a dispensary with accommodation for in-patients.

Bonai.—Tributary State of Orissa, Bengal, lying between $21^{\circ} 39'$ and $22^{\circ} 8'$ N. and $84^{\circ} 30'$ and $85^{\circ} 23'$ E., with an area of 1,296¹ square miles. It is bounded on the north by the State of Gāngpur and Singhbhūm District; on the east by Keonjhar; and on the south and west by Bāmra. Bonai is shut in on all sides by rugged forest-clad hills, intersected by a few passes or gorges which connect it with the surrounding States. The space within is not one extensive valley but is interspersed here and there with hills. Most of the hills are densely wooded to the summit, and except at the regular passes are inaccessible to beasts of burden. The principal peaks are MĀNKARNĀCHA (3,639 feet), BĀDĀMGARH (3,525 feet), and KUMRITĀR (3,490 feet). Elephants, tigers, leopards, bears, hog, deer, and peafowl are met with in the forests. The Brāhmanī, the only large river, flows from north to south through the centre of the State. It receives the drainage of the surrounding hill streams, and waters a beautiful and spacious valley containing large groves of mango and other fruit trees.

Bonai was ceded to the British Government in 1803 under the Treaty of Deogaon by Raghuji Bhonsla of Nāgpur, to whom it was restored by a special engagement in 1806. It reverted to the British Government under the provisional agreement concluded with Mādhuji Bhonsla (Appa Sāhib) in 1818, and was finally ceded by the treaty of 1826. The State is ordinarily administered, subject to certain restrictions, by the Rājā, who is required to pay a tribute and to render military service in time of war. Indra Deo, the grandfather of the present chief, received the title of Bahādur for his services in suppressing the Keonjhar rising. During the minority of the present chief the State is under the direct management of Government. The total revenue is Rs. 1,30,000, and the tribute is Rs. 500 per annum. The ruling family claims to have come from Ceylon, but appears to be of aboriginal Bhuiyā origin. In 1905 the State was transferred from Chotā Nāgpur to Orissa. The relations of the chief with the British Government are regulated by a *sanad* granted in 1899, and reissued in 1905 with a few verbal changes due to the transfer of the State to Orissa. Under this *sanad* the chief was formally recognized and permitted to administer his territory subject to prescribed conditions, and the tribute was fixed for a further period of twenty years, at the end of which it is

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liable to revision. The chief is under the general control of the Commissioner of Orissa, who is Superintendent of the Tributary Mahāls, as regards all important matters of administration, including the settlement and collection of land revenue, the imposition of taxes, the administration of justice, arrangements connected with excise, salt, and opium, and disputes in which other States are concerned ; and he cannot levy import and export duties or transit dues, unless they are specially authorized by the Lieutenant-Governor. He is permitted to levy rents and certain other customary dues from his subjects, and is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200 ; but sentences of imprisonment for more than two years and of fine exceeding Rs. 50 require the confirmation of the Commissioner.

The recorded population increased from 32,120 in 1891 to 38,277 in 1901, the growth being due partly to a more accurate enumeration and partly to the country having been rendered more accessible by the Bengal-Nāgpur Railway. The inhabitants reside in 217 villages, the most populous of which are situated in the central valley along the banks of the Brāhmanī ; for the whole State the density is 30 persons per square mile. Hindus numbered 26,371 and Animists 11,745. The population consists chiefly of aborigines, the most numerous tribes being the Bhuiyās, Gonds, Hos, Khariās, Mundās, and Pāns. The Bhuiyās and Gonds are the most influential classes ; they have always shown a very independent attitude towards the Rājā, and within the last thirty years one rebellion of the Bhuiyās and two of the Gonds have taken place. The headman of the Bhuiyās, who is called *saont*, claims the prerogative of bestowing on the Rājā the *tika* or sign of investiture, a claim which is, however, not recognized by the chief. The two headmen or leaders of the Gonds are respectively called *mahāpātra* and *dandpāt*. The *saont*, the *mahāpātra*, and the *dandpāt* are the only three fief-holders or sub-proprietors under the Rājā, each possessing several villages and having to render military service to the Rājā if required, besides paying a fixed yearly rental. There is some immigration of Kols, Mundās, and Oraons from Singhbhūm, and of Kaltuyās (Kolthās) and Agariās from Sambalpur. These folk take leases of jungle-clad tracts and reclaim them, and the area under cultivation is thus being rapidly extended. The Kaltuyā settlers, who are mostly paid labourers under the Bhuiyās, are very industrious and intelligent cultivators ; in some places they bank up the hill streams and utilize for irrigation the

water thereby stored up. Rice is the staple product; three successive crops are grown in the year—the *gorādhān* or the earliest highland autumn rice, the ordinary autumn crop, and the winter rice. Among the minor crops are pulses, maize, and oilseeds; castor-oil plants and sugar-cane are largely grown on homestead lands; and cotton is also extensively cultivated. Pasturage is plentiful. Bonai possesses large forests, full of valuable trees, such as *sāl* (*Shorea robusta*), *āsan* (*Terminalia tomentosa*), *piāsāl* (*Pterocarpus Marsupium*), *sissū* (*Dalbergia Sissoo*), and *kusum* (*Schleichera trijuga*). Since these have been made accessible by the opening of the Bengal-Nāgpur Railway, they have formed a valuable source of income to the State. Minor forest products of value are lac, *tasar* cocoons, and *sabai* grass (*Ischaemum angustifolium*). Gold is found in small quantities in the bed and banks of the Brāhmanī; the sand is washed by Jhorā Gonds, but their daily earnings range only from 2 to 4 annas. In 1896 the Bengal Gold and Silver Company took a prospecting lease from the Rājā for three years, paying a premium of Rs. 25,000, but the enterprise was abandoned as unprofitable. Iron is found, but is extracted only for local use. Brass pots and ornaments, pots of a soft black stone, and coarse cotton cloths are manufactured, but in quantities hardly sufficient to meet the local demand. The chief imports are European cotton fabrics, salt, kerosene oil, machine-made thread, and tobacco; and the chief exports are oilseeds, hides, horns, lac, *tasar* cocoons, timber, *ghā*, *sabai* grass, and wax. These articles are carried to the railway on pack-bullocks or by coolies; for want of good roads, carts are seldom used. An unmetalled and unbridged road connects Bonaigarh with Raurkelā station on the Bengal-Nāgpur Railway, a distance of about 45 miles.

The police force consists of 6 officers and 27 men, besides a body of village *chaukidārs* and *goraits*. A dispensary is maintained by the State at Bonaigarh, and at the same place there is a jail with accommodation for 50 prisoners. The State also maintains 11 lower primary schools.

Bādāmgārh.—Peak in Bonai State, Bengal, situated in 21° 49' N. and 85° 16' E., and rising to a height of 3,525 feet above sea-level.

Bonaigarh.—Capital of Bonai State, Bengal, situated in 21° 49' N. and 84° 58' E. Population (1901), 1,850. Bonai-garh, which contains the residence of the Rājā, a dispensary, and a jail, is surrounded on three sides by the Brāhmanī river, and is further defended by a high mud wall and moat. It

is connected by an unbridged and unmetalled road about 45 miles in length with Raurkelā station on the Bengal-Nāgpur Railway. The site, which is very picturesque, is 505 feet above sea-level.

Kumritār.—Peak in Bonai State, Bengal, situated in $21^{\circ} 45'$ N. and $85^{\circ} 9'$ E., 3,490 feet above sea-level.

Mānkarnācha.—Highest peak in Bonai State, Bengal, situated in $21^{\circ} 47'$ N. and $85^{\circ} 14'$ E., and rising to a height of 3,639 feet above sea-level.

Bāmra.—Feudatory State in Bengal, lying between $21^{\circ} 9'$ and $22^{\circ} 12'$ N. and $84^{\circ} 8'$ and $85^{\circ} 13'$ E., and occupying a tract of hilly country between the valley of the Mahānadi and the Chotā Nāgpur plateau. Up to 1905 the State was under the political control of the Central Provinces. The eastern portion of the State consists of a mass of hill and jungle, but to the west and north there is open and fertile country. The total area is 1,988 square miles, and the capital is DEOGARH. The only important river is the Brahmanī, which flows through a small strip on the eastern border. Wild elephants are found in the State. The ruling family are Gangābansi Rājputs. They have a genealogy dating back to A.D. 1602; and according to their traditions the first Rājā of Bāmra belonged to the royal family of Patnā State, and was stolen from his home and made king of Bāmra by the Bhuiyās and Khonds. The late Rājā, Sir Sūdhā Deo, K.C.I.E., was a gentleman of advanced education and enlightened views who did much to improve his State. He died in 1903 and was succeeded by his son, Rājā Tribhuvan Deo. The relations of the State with Government are controlled by a Political Agent subordinate to the Commissioner of Orissa. The population in 1901 numbered 123,378 persons, showing an increase since 1891 of 18 per cent. About 77 per cent. of the population speak Oriyā and 18 per cent. the Oraon and Mundārī dialects. As is shown by the language, the population is mainly Oriyā, the Chāsās, Kisāns, Gahrās, and Gāndas being the most important castes numerically. There are also a number of Gonds and Bhuiyās.

The soil is light and sandy, the best quality being found under the hills. The area cultivated in 1905 was 227 square miles, or 11 per cent. of the total, having largely increased during the last decade. The principal crops are rice, *tl*, and castor, about 140 square miles being always under rice. There are 974 irrigation tanks. The State forests cover 1,734 square miles, and contain valuable *sāl* timber (*Shorea robusta*),

which has only been exploited within recent years. Saw-mills have been established at Sirid, 20 miles from Deogarh, at which about 50,000 sleepers are at present annually produced for export. Lac, silk cocoons, catechu, and myrabolams are other forest products. The State also contains considerable deposits of iron ore and mica. At Balam, 10 miles from Deogarh, the late chief established a factory with an irrigation pump, and also flour-mills, sugar-cane-mills, and an oil-mill worked by two portable engines. There are 23 miles of metalled and 183 miles of unmetalled roads, maintained from the State funds under the direct supervision of the chief. The Bengal-Nāgpur Railway passes through the north-eastern corner of the State with two stations—Bāmra Road and Garpos—within its borders.

The revenue from all sources amounted in 1904 to Rs. 1,54,000, the principal items being land revenue, Rs. 68,000; forests, Rs. 16,000; and excise, Rs. 10,000. The taxation of land is about 10 annas per cultivated acre. A regular assessment has been made on the basis of soil classification. The expenditure in 1904 was Rs. 1,48,000, the principal items being the private expenses of the chief's family, Rs. 50,000; general administration, Rs. 8,200, police, Rs. 12,000; and education and medical, Rs. 5,000 each. Rs. 1,500 is paid as tribute to the British Government. In 1904 the State had 28 schools with 1,005 pupils, including a high school at Deogarh. At the Census of 1901, 5,011 persons were shown as literate, all in Oriyā, and 4 per cent. of the population (7.6 males and 0.3 females) were able to read and write. The State maintains two dispensaries, at Deogarh and Kuchindā, in which nearly 19,000 cases were treated during 1904.

Deogarh Town.—Capital of the Bāmra Feudatory State, Bengal, situated in 21° 32' N. and 84° 45' E., 58 miles by road from Bāmra Road station on the Bengal-Nāgpur Railway. Population (1901), 5,702. The town lies in a hollow surrounded by hills, over one of which there is a picturesque waterfall. Deogarh has lately increased in population rapidly owing to the enlightened views of the chief, who has invited many educated natives to take up their residence at his headquarters. It is well laid out, and has ornamental parks and gardens. The town is connected by telephone with Bāmra station, the total length of wire being 84 miles. It has also a printing press with Oriyā type; and a weekly paper is published, which circulates in Sambalpur and the Oriyā States. A high school affiliated to the Calcutta University,

with a chemical and physical laboratory, is maintained by the State.

Rairākhhol.—Feudatory State in Bengal, lying between $20^{\circ} 56'$ and $21^{\circ} 24'$ N. and $83^{\circ} 59'$ and $84^{\circ} 53'$ E., with an area of 833 square miles. Up to 1905 political control was exercised by the Central Provinces Administration. It lies to the south-east of Sambalpur District, and is bounded by the Bāmra and Sonpur States on the north and south. The capital is at Rāmpur, a village (1901) of 1,416 inhabitants, 44 miles from Sambalpur by road. The greater part of the State consists of hilly country covered with dense forests, but there are some open tracts on the north and south. Wild elephants, buffalo, and bison are found in the forests, and also, it is said, a special variety of light-coloured wild hog. The ruling family claim to be Kadambansi Rājputs, and to be a branch of the Bonai Rāj family.

The State was formerly subordinate to Bāmra, but was freed from its dependence and constituted one of the Garhjat cluster by the Rājās of Patnā in the eighteenth century. The traditions of the ruling house relate that there used to be constant war between Bāmra and Rairākhhol, and on one occasion the whole of the Rairākhhol family were destroyed, with the exception of one boy who was hidden by a Butkā Sudh woman. She placed him in a cradle supported on four uprights, and when the Bāmra Rājā's soldiers came to seek for him, the Sudhs swore, 'If we have kept him either in heaven or earth, may our God destroy us.' The Bāmra people were satisfied with this reply and the child was saved, and on coming to manhood he won back his kingdom. In consequence of this incident, the Butkā Sudhs are considered by the Rairākhhol house as relations on the mother's side; they have several villages allotted to them, and perform sacrifices for the ruling family. In some of these villages nobody may sleep on a cot or sit on a high chair, so as to be between heaven and earth, in the position in which the child was saved. The late Rājā Bishan Chandra Janāmuni died in 1900, after having occupied the *gaddi* for seventy-five years. His grandson Rājā Gauro Chandra Deo, then thirty years of age, was installed in the same year, subject to certain conditions, the obligation to accept a Government Dīwān during a probationary period being one. The relations of the State with Government are in charge of a Political Agent who is subordinate to the Commissioner of Orissa. The population in 1901 was 26,888, having increased by 32 per cent. during the previous decade.

The number of inhabited villages is 319, and the density of population 32 persons per square mile. Oriyā is the language of 90 per cent. of the population, and the Oraon and Mundārī dialects are spoken by a few hundred persons each. The Chāsās are the most numerous caste in the State, and next to them the Gonds, Gāndas, and Sudhs.

The soil is generally light and sandy. A regular survey has been carried out in only about half of the total number of villages, the assessments for the smaller villages being made summarily. As nearly as can be ascertained, about 64 square miles, or 8 per cent. of the total area, were cropped in 1904. Rice occupies 37 square miles, and the crops next to this in importance are *til*, *urad*, and *kulthi*. There are 376 tanks, from which 3,400 acres can be irrigated. About 470 square miles are covered with forest. *Sāl* (*Shorea robusta*) is the principal timber tree, and a considerable revenue is derived from the sale of *sāl* sleepers. The rearing of *tasar* silk-cocoons in the State forests is a local industry, as is also the extraction of catechu. There are extensive deposits of iron ore, which are worked by the Khonds, a few manufactured implements being delivered to the Rājā as a cess. The State contains 3 miles of gravelled and 35 of embanked roads. The principal routes are from Rāmpur to Sambalpur, Sonpur, Bāmra, and Cuttack. Exports of produce are taken to Sambalpur railway station.

The total revenue in 1904 was Rs. 55,000, of which Rs. 13,000 was derived from land, Rs. 13,000 from forests, and Rs. 7,000 from excise. Land revenue is still partly paid in kind in certain tracts, while in others, called *paikī parganas* and situated on the frontiers of the State, the cultivators formerly lay under an obligation of military service, which has now shrunk to that of escort duty to the Rājā. In twelve years since 1893, Rs. 93,000 has been expended on public works under the supervision of the Engineer of the Chhattisgarh States division. Besides the roads already mentioned, a palace for the chief's family and State offices have been constructed at Rāmpur. The total expenditure in 1904 was Rs. 56,000. The tribute paid to the British Government is Rs. 800, and is liable to revision. The State supports five primary schools, with 250 pupils, the expenditure being about Rs. 1,000. At the Census of 1901 only 281 persons were shown as literate, all in Oriyā. A dispensary has been established at Rāmpur, at which 14,000 persons were treated in 1904.

Sonpur State.—Feudatory State in Bengal, lying between $20^{\circ} 32'$ and $21^{\circ} 11'$ N. and $83^{\circ} 27'$ and $84^{\circ} 16'$ E., with a total area of 906 square miles. The State was transferred from the Central Provinces to Bengal in 1905. It lies to the south of Sambalpur District on both sides of the Mahānadī river, between Patnā State on the west and Rairākhol on the east. The capital is at SONPUR, 54 miles distant from Sambalpur by road. The country consists of an undulating plain, with small isolated hills scattered over its surface. The Mahānadī flows through its centre, and other rivers are the Ong and Suktel, a tributary of the Tel. The Jīra bounds Sonpur to the north and the Tel to the south, all these rivers being affluents of the Mahānadī on its right bank. The surface soil has been impoverished by erosion from the rivers. The forests are not extensive, and do not contain valuable timber. Copperplate inscriptions found in the neighbourhood of Sonpur town, which are attributed to the later Gupta kings and the Ganga kings of Kalinga, prove that Sonpur was colonized by the Hindus at an early period of history; and the extensive ruins of houses, temples, and wells show that it was formerly a much more important place than it is at present. Nothing definite is known of its history prior to about 1556, when it was conquered by Madhukar Sāh, fourth Rājā of Sambalpur, and settled on his son Madan Gopāl, of whom the present ruling family are the direct descendants. They are Chauhān Rājputs by caste. The grandfather of the present chief, Nīlādhar Singh Deo, obtained the title of Rājā Bahādur for services rendered to the British Government during the Sambalpur insurrection. He died in 1891, and was succeeded by his son Pratāp Rudra Singh Deo, who obtained the same title in recognition of the improved methods of administration introduced by him. He died in 1902, and was succeeded by his son Rājā Bīr Mitrodaya Singh Deo, then 28 years old, a young man of considerable intelligence and promise, who had for some time taken an active part in the administration. A Political Agent has been appointed by the Bengal Government for the management of its relations with the State. The population in 1901 was 169,877, having decreased by 13 per cent. during the previous decade. The density is 188 persons per square mile. The State contains one town, SONPUR (population, 8,887), and 899 inhabited villages. Binkā, lying on the Mahānadī between Sambalpur and Sonpur, is a place of some importance. The inhabitants of the State are practically all Oriyās, and speak that language. Gahrās or Ahīrs,

Brāhmans, Dumāls, Bhuliās, and Kewats or boatmen are the principal castes. The large proportion of Brāhmans may be attributed to the patronage of the great-grandfather of the present Rājā, and of his father, who was a Sanskrit scholar.

The soil is sandy and its fertility has been reduced by erosion. About 197 square miles, or 22 per cent. of the total area, were cultivated in 1904. Rice occupied 167 square miles, and other crops are *mūng*, *kulthī*, and *til*. The State contains 1,698 tanks, from which nearly 34 square miles can be irrigated. The forests are situated principally along the borders. *Sāl* (*Shorea robusta*) is the principal timber tree, and most of the other common species also occur. The exports of forest produce are inconsiderable, as there is a good market for them in the State itself. No minerals are worked at present. The weaving of coarse cotton and *tasar* silk cloth are the only industries, and the exports consist almost solely of agricultural produce. Before the construction of the Bengal-Nāgpur Railway, when the Mahānadī was the main outlet for the trade of Sambalpur, both Sonpur and Binkā were of some importance as places of call and transshipment, and numbers of boatmen were employed in the carriage of goods on the river. The through traffic has now practically vanished, but the produce of Sonpur is taken either up to Sambalpur or down to Cuttack. Sonpur is connected by surface roads with Sambalpur, Bolāngir, Rairākhōl, and Baud, and Binkā with Barpālī. The State manages its own public works.

The revenue of the State in 1904 was Rs. 1,20,000, of which Rs. 46,000 was derived from land, Rs. 18,000 from forests, and Rs. 23,000 from excise. The State has been surveyed, but no regular settlement has been made, and the village headmen hold on leases granted to them in 1888. The incidence of land revenue is 5 annas 4 pies per cultivated acre. The expenditure in 1904 was Rs. 1,20,000, the main heads being Government tribute (Rs. 9,000), expenses of the ruling family (Rs. 62,000), general administration (Rs. 13,000), and police (Rs. 9,000). The tribute is liable to revision. The educational institutions comprise 29 schools with 2,109 pupils, including two English middle schools with 59 pupils, a vernacular middle school, two girls' schools, and a Sanskrit school with 12 scholars. The expenditure on education in 1904 was Rs. 4,500. At the Census of 1901, 1,758 persons were returned as literate, one per cent. (2.1 males and 0.1 females) being able to read and write. Dispensaries have been established

at Sonpur and Binkā, and 23,600 patients were treated in them in 1904.

Sonpur Town.—Capital of the Feudatory State of the same name in Bengal, situated in $20^{\circ} 51' N.$ and $83^{\circ} 55' E.$, on the Mahānadi river at its junction with the Tel, 54 miles by road south of Sambalpur station on the Bengal-Nāgpur Railway. Population (1901), 8,887. The town contains two large tanks and a temple of Mahādeo, in which copperplates have been found giving the name of a king who reigned here in the tenth century. Coins and other remains are also found on the site, indicating that Sonpur was a comparatively large town at an early period. When the Mahānadi was the highway between Sambalpur and Cuttack, Sonpur was a place of considerable importance, of which the transfer of trade to the railway has partially deprived it. There is some local traffic on the river, and various industries are carried on in the town, among which may be mentioned the manufacture of brass images, gold-, silver-, and copper-work, silk and cotton cloth weaving, and the manufacture of iron implements. Sonpur possesses two English middle schools with 55 pupils, a girls' school, and a Sanskrit school.

Patnā.—Feudatory State in Bengal, lying between $20^{\circ} 9'$ and $21^{\circ} 4' N.$ and $82^{\circ} 41'$ and $83^{\circ} 40' E.$, with an area of 2,399 square miles. Up to 1905 the State was included in the Central Provinces. It lies in the valley of the Mahānadi, bounded on the north by Sambalpur, on the west by Raipur District, on the south by the Kālāhandī State, and on the east by the Baud State. The capital is at Bolāngir, a village with 3,706 inhabitants (1901), 75 miles from Sambalpur by road. The State consists of an undulating plain, broken by numerous isolated peaks or small ranges, while a more continuous chain of hills runs along the north-western border. The northern and southern portions are open and well cultivated, and are divided by a belt of hilly country covered with dense forest which traverses the centre. The Tel river divides Patnā from Kālāhandī on the south, and the Ong from Sambalpur and Sonpur on the north. The Suktel and Bārābhailat traverse the centre of the State.

The Mahārājās of Patnā formerly dominated a large extent of territory to the east of the Ratanpur kingdom, and were the head of a cluster of States known as the Athāra Garhjāt or 'eighteen forts.' The present rulers are Chauhān Rājputs, and claim for their family an antiquity of 600 years in Patnā, with a pedigree of twenty-eight generations. According to

their traditions, their ancestor was a Rājput prince who lived near Mainpurī and was expelled from his territories by the Muhammadans. He came with his family to Patnā, where he was killed in battle; but his wife, who was pregnant, was sheltered by a Binjhāl, in whose hut she brought forth a son. At this time Patnā was divided among eight chiefs called the Ath Mālik, who took it in turn to reign for one day each over the whole territory. The Rājput boy Rāmai Deo, on growing up, killed all the chiefs and constituted himself sole ruler. In succeeding reigns the family extended their influence over surrounding territories, including the greater part of what is now Sambalpur District and the adjoining States, the chiefs of this area being made tributary. Chandarpur was conquered from the rulers of Ratanpur. The twelfth Rājā, Narsingh Deo, ceded to his brother Balrām Deo such portions of his territories as lay north of the Ong river. The latter founded a new State (Sambalpur), which very soon afterwards by acquisition of territory in every direction became the most powerful of all the Garhjat cluster, while from the same time the importance of Patnā commenced to decline. In the eighteenth century, when the Marāthās conquered Sambalpur, Patnā had become a dependency of that State, and was also made tributary; and its subsequent history is that of Sambalpur. It was made a Feudatory State in 1865. In 1869 the tyranny of Mahārājā Sūr Pratāp Deo and of his brother Lāl Bishnāth Singh caused a rising among the Khonds of Patnā. They were speedily reduced, but not until Lāl Bishnāth Singh and his followers had committed many atrocities in cold blood. An inquiry into the causes of the outbreak led to the deposition of the chief, and the assumption of the management of the State by the British Government in 1871. The Mahārājā died in 1878, and was succeeded by his nephew Rāmchandra Singh, who was born in 1872 and educated at the Rājkumār College, then located at Jubbulpore. He was installed in 1894, but had already then begun to show some signs of derangement of intellect, and in 1895 he shot his wife and himself in the palace, both dying instantaneously. As he left no male issue, his uncle Lāl Dalganjan Singh was recognized as chief, on his undertaking that he would conduct his administration with the assistance of a Dīwān appointed by Government. In 1900, in consequence of the unsatisfactory condition of the State and an outbreak of organized dacoity, the chief was called on to invest his Dīwān with large judicial powers and control over the police. A Political Agent in sub-

ordination to the Commissioner of Orissa, as Superintendent of the Tributary Mahāls, controls the relations of the State with the Bengal Government.

The population in 1901 was 277,748, having decreased by 16 per cent. during the preceding decade. The decrease is mainly to be attributed to the famine which visited the State in 1900. The number of inhabited villages is 1,850, and the density of population 116 persons per square mile. Nearly the whole population are Oriyās, and speak Oriyā. Gahrās or Ahīrs, Gāndas, Khonds, Gonds, and Savaras are the most numerous castes.

The soil is generally light and sandy, but some black soil is found in the north. About a third of the whole State is comprised in *zamīndāri* or other estates held on special tenures, of which no survey or measurement has been made. Of the remaining portion, 426 square miles were cultivated in 1904. The staple crops are rice, covering 243 square miles, *til* 86, pulses 41, and cotton 11. The surveyed area contains 1,139 wells and 1,581 tanks, from which 48 square miles can be irrigated. The exact area under forest is not known, but it has been estimated at 1,400 square miles. The principal timber tree is *sāl* (*Shorea robusta*), with which are associated *sāj* (*Terminalia tomentosa*), *bījāsāl* (*Pterocarpus Marsupium*), and other common species. There is a little teak in the extreme south. Owing to the distance of the State from a railway, the exports of forest produce are not important. The sale of the hides of animals forms, however, a not inconsiderable item of revenue. Iron ore is found, and is smelted by indigenous methods and made up into agricultural implements. The State contains 45 miles of gravelled and 58 of embanked roads. The principal routes are those leading from Sambalpur by Bargarh to Bolāngir and on to Bhāwani Patnā, the Bolāngir-Sonpur road, and the road leading from Raipur to Vizianagram, which passes for 13 miles through Patnā. Exports of produce are sent principally to Sambalpur.

The total revenue in 1904 was Rs. 2,00,000, of which Rs. 77,000 was derived from land, Rs. 25,000 from forests, and Rs. 20,000 from excise. The land revenue is obtained by settlement with the headmen of villages, who are allowed a percentage of the 'assets.' In the area called the Kondhān, inhabited by the forest Khonds, the revenue is paid through the tribal chiefs, who receive remuneration in cash. The three tracts of Angar, Sorandā, and Patnāgarh have been regularly surveyed and assessed on the 'soil-unit' system of the Central

Provinces, and the remaining area is summarily assessed. The total expenditure in 1904 was Rs. 1,70,000: the principal heads being tribute, Rs. 8,500; expenses of the ruling family, Rs. 39,000; general administration, Rs. 14,000; police, Rs. 22,000; and public works, Rs. 33,000. The tribute is liable to revision. The public works of the State were managed by the Chhattisgarh States division from 1893 to 1904, and during that time Rs. 2,33,000 was expended. Besides the roads already mentioned, a palace for the Mahārājā, a courthouse, and a dispensary have been constructed, in addition to minor works. The educational institutions comprise one English and one vernacular middle school, a girls' school, and 37 primary schools, with a total of 3,819 pupils, including 672 girls. The expenditure on education in 1904 was Rs. 9,200. At the Census of 1901 only 5,142 persons were returned as literate, 1.9 per cent. (3.6 males and 0.1 females) being able to read and write. A dispensary has been established at Bolāngir, at which 25,000 patients were treated in 1904.

Kālāhandī (formerly known as Karond).—Feudatory State in Bengal, lying between $19^{\circ} 3'$ and $20^{\circ} 28'$ N. and $82^{\circ} 32'$ and $83^{\circ} 47'$ E. It is bounded on the north by the Patnā State, on the north-west by Raipur District, and on the east, south-east, and south-west by the Jeypore *zamindari* of Vizagapatam District. The area of the State is 3,745 square miles; and the capital is Bhawāni Patnā, a village of 4,400 inhabitants, 140 miles from Sambalpur and 130 from Chicacole station on the East Coast Railway. From the north-east to the south-west of the State runs an almost continuous range of hills, a part of the Eastern Ghāts, with several peaks approaching 4,000 feet in elevation. To the north of this range lies a stretch of comparatively open country interspersed with low hills. The uplands are generally well wooded, except in tracts where the forest has been burnt off for cultivation. The Indrāvati river rises in the south of the State and passes into Bastar after a short course through the hills. The open country is drained by the Tel river and its affluent the Hatti.

The ruling family are Nāgbansi Rājputs, and are said to be connected with the Satrangarh Rājās of Chotā Nagpur. The State appears to have existed from a remote period without being subject to any definite suzerainty. The payment of tribute and acknowledgement of their supremacy were, however, imposed by the Marāthās. In 1878 the chief, Udit Pratāp Deo, obtained an hereditary salute of 9 guns. In 1881, on the death of Udit Pratāp Deo, discontent broke out among

the primitive Khond tribe, who form a large proportion of the population. The late Rājā had encouraged the immigration of members of the Koltā caste, who are excellent agriculturists and keenly acquisitive of land ; and many of the Khond headmen and tenants had been ousted by them. The smouldering grievances of the Khonds had been suppressed by Udit Pratāp, but they now found expression in acts of plunder. A British officer was dispatched to Kālāhandī to inquire into their complaints, and a settlement was arrived at, which it was thought would prove satisfactory. These hopes, however, were illusory ; and in May, 1882, the Khonds rose and slaughtered more than 80 Koltās, while 300 more were besieged in the village of Norlā, the Khonds appearing with portions of the scalps and hair of the murdered victims hanging to their bows. On the arrival of a body of police, which had been summoned from Vizagapatam, they dispersed ; and the outbreak was soon afterwards suppressed, seven of the ringleaders being arrested, tried, and hanged. A settlement was made of the grievances of the Khonds, and the tranquillity of the State has not again been disturbed. The next chief, Raghu Kishor Deo, was installed in 1894 on attaining his majority, but was murdered in 1897 by a servant. He left an infant son of two years of age, Brij Mohan Deo, who is now being educated at Bhawāni Patnā. During his minority the management of the State is in charge of a Political Agent subordinate to the Commissioner of Orissa.

The population in 1901 was 350,529, having increased by 7 per cent. during the previous decade. The number of inhabited villages is 2,198, and the density of population 94 persons per square mile. About 81 per cent. of the population speak Oriyā and 15 per cent. Khondī, the language of the Khond tribe. Khonds number 103,000, or 29 per cent. of the total ; and next to them the most numerous castes are Gahrās or Ahīrs, Doms (a menial caste of sweepers), and Gonds. There is a very slight sprinkling of Telugu castes.

Along the base of the hills is found a light alluvial soil, fertile and easily tilled, and yielding good crops of almost any grain. The open country is covered by black cotton soil mixed with limestone nodules and with the yellow clay or gravel formed from metamorphic rock. The hilly country on the south and east, amounting to 62 per cent. of the whole State, has not been surveyed. Of the remaining land, 632 square miles, or 45 per cent. of the available area, are occupied for cultivation, and 437 were cultivated in 1904. The staple

crops are rice, covering 285 square miles; *tīl*, 68; and *kodon* and *kutkī*, 22. The State contains 1,464 tanks, from which 289 square miles can be irrigated. The numerous streams flowing from the hills also afford natural irrigation to land lying on their banks, and fields in this position give two crops in the year. Oranges and plantains are grown on irrigated land. The prevailing forest tree in the north of the State is *sāl* (*Shorea robusta*), teak being rare and local. With the *sāl* are associated the other common trees of Peninsular India. Farther to the south between the Tel and Indrāvati, where a range of hills intervenes, the *sāl* disappears and *sāj* (*Terminalia tomentosa*) is the commonest tree. Owing to the distance of the forests from the railway, exports of timber are inconsiderable. No minerals are worked, but graphite occurs in veins and pockets in the metamorphic rocks. The State contains 48 miles of gravelled and 116 of embanked roads. The principal routes are those from Bhawāni Patnā to Raipur, and to Sambalpur through Bolāngir in Patnā, and from Jūnāgarh to Rājim through Deobhog. Exports are sent principally to Raipur and the Madras Presidency, while imports are received from Raipur, Sambalpur, and Madras.

The total revenue in 1904 was Rs. 1,11,000, the principal items being land revenue and cesses, Rs. 59,000; forests, Rs. 14,000; and excise, Rs. 24,000. The unsurveyed territory on the south and east is comprised in six minor *zamīndārī* estates, and a hilly tract called Dongurlā, mainly occupied by Khonds who practise shifting cultivation. The revenue paid by the *zamīndārs* is Rs. 3,500. Two of the *zamīndārī* families are related to the chief. The remaining area has been cadras-trally surveyed and a settlement effected. The taxation of land is about 8 annas per cultivated acre. About Rs. 30,000 of the gross land revenue has been assigned in revenue-free grants. The total expenditure in 1904 was Rs. 1,36,000, the principal items being tribute, Rs. 12,000; allowances to the ruling family, Rs. 20,000; general administration, Rs. 14,000; and police, Rs. 18,000. The tribute is liable to revision. In twelve years since 1893 the State has expended 3.23 lakhs on public works under the supervision of the Engineer of the Chhattīsgarh States division. The works carried out include, besides the roads mentioned, the construction of a palace, public offices, a hospital, police station, school, and *sarai* at Bhawāni Patnā. The educational institutions comprise 48 schools with 3,876 pupils, including one English and two vernacular middle schools and a girls' school. The total expenditure on education in 1904

was Rs. 7,000. At the Census of 1901, 6,129 persons were returned as able to read and write, the proportion being 1.7 per cent. (3.3 males and 0.1 females). Dispensaries have been established at Bhawāni Patnā, Jūnāgarh, Kāshīpur, and Thuāmāl, and a separate dispensary for females at Bhawāni Patnā. About 63,000 persons were treated in these institutions in 1904.

Chotā Nāgpur States.—A term formerly applied to nine Native States in Chotā Nāgpur, Bengal, consisting of the seven Tributary States of Chāng Bhakār, Koreā, Surgujā, Udaipur, Jashpur, GĀNGPUR, and BONAI, and the two Feudatory States of KHARSĀWĀN and SARAIKELĀ. The five States first named were transferred in October, 1905, to the Central Provinces, as part of the territorial redistribution connected with the formation of the new Province of Eastern Bengal and Assam, and the Oriyā-speaking States of Gāngpur and Bonai were at the same time attached to the Orissa Tributary States. The Chotā Nāgpur States therefore now include only the two small States of Kharsāwān and Saraikelā. These States, which lie between $22^{\circ} 29'$ and $22^{\circ} 54'$ N. and $85^{\circ} 38'$ and $86^{\circ} 0'$ E., have a total area of 602 square miles, and are practically wedged in between the Districts of Mānbhūm and Singhbhūm. They are bounded on the north by the Districts of Rānchī and Mānbhūm; on the east and west by Singhbhūm; and on the south by the Orissa State of Mayūrbhanj and Singhbhūm.

Kharsāwān.—Feudatory State of Chotā Nāgpur, Bengal, lying between $22^{\circ} 41'$ and $22^{\circ} 53'$ N. and $85^{\circ} 38'$ and $85^{\circ} 55'$ E., with an area of 153¹ square miles. It is bounded on the north by the Districts of Rānchī and Mānbhūm; on the east by the State of Saraikelā; and on the south and west by Singhbhūm District. The Sonai river flows through the State from north-west to south-east. The country on the north and the Kolhān *pīr* on the south of this river consist of long ranges of jungle-clad hills, attaining in one place an elevation of 2,529 feet. The depressions between them are terraced for cultivation. The rest of the State is a lowland tract, dotted here and there with small isolated hills. In this part, almost the whole of the cultivable area has been cleared of forest and turned into rice lands. Iron is found in a nodular form in most of the hilly ranges. Gold is found in very small quantities in the sands of the Sonai river. Copper must once have been extracted on a large scale in Kharsāwān, and traces of ancient mines can be

¹ This figure, which differs from the area shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

seen at intervals throughout the whole breadth of the State for a length of 15 miles ; the most extensive were in the neighbourhood of Lopso. Recent prospecting operations indicate that the supply of copper is still far from exhausted, and it is probable that in the near future the State may once more become an important mining centre. Nodular limestone, a stalagmitic deposit called *asurhad*, slate, and potstone are found in the hilly tracts. About 40 square miles of the State are covered with forest, containing chiefly *sāl* (*Shorea robusta*), *āsan* (*Terminalia tomentosa*), *gamhār* (*Gmelina arborea*), *kusum* (*Schleichera trijuga*), *piāsāl* (*Pterocarpus Marsupium*), *kend* (*Diospyros melanoxylon*), *jāmun* (*Eugenia Jambolana*), and bamboos. Minor jungle products comprise lac, *tasar* cocoons, and myrabolams. Tigers, leopards, bears, several kinds of deer, hares, and peafowl abound in the forests. Snakes of several kinds are common everywhere.

The chief of Kharsāwān belongs to a junior branch of the Porāhāt Rājā's family. Some generations before the establishment of British rule, Kunwār Bikram Singh, a younger brother of the Rājā, obtained from him as a maintenance grant the eleven *pīrs* which constitute the present States of Saraikelā and Kharsāwān. Bikram Singh by his two wives left five sons. The eldest succeeded to Saraikelā, and the second son, from whom the present chief is directly descended, to Kharsāwān. The State first came under the notice of the British in 1793, when, in consequence of disturbances on the frontier of the old Jungle Mahāls, the Thākūr of Kharsāwān and the Kunwār of Saraikelā were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present *sanad* was granted in 1899. He exercises all administrative powers, executive and judicial, subject to the control of the Deputy-Commissioner of Singhbhūm and the Commissioner of Chotā Nāgpur. He is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200, but sentences of imprisonment for more than two years require the confirmation of the Commissioner. Heinous offences calling for heavier punishment are dealt with by the Deputy-Commissioner of Singhbhūm. The present chief, Srī Rām Chandra Singh Deo, being a minor, the State is, for the time being, under direct British administration.

The population increased from 35,470 in 1891 to 36,540 in 1901, the density being 239 persons per square mile. The

inhabitants dwell in 263 villages, the most important of which is Kharsāwān, the capital of the State. Hindus numbered 19,864 and Animists 16,277, the Hos being the most numerous tribe. About 78 per cent. of the population are supported by agriculture. The principal crops grown in the State in order of importance are rice, maize, pulses, mustard, sugar-cane, and tobacco. Coarse cotton cloths and iron cooking utensils are manufactured for local use, and in some villages leaf mats are made. The chief exports are rice, pulses, oilseeds, stick-lac, *tasar* cocoons, and iron; and the chief imports are salt, cotton thread, cotton piece-goods, tobacco, and brass cooking utensils. Trade has been stimulated by the opening of the Bengal-Nāgpur Railway, which runs through 12 miles of the State boundary; a station at Amdā is 3 miles from the capital. The State contains 8 miles of metalled and 28 miles of unmetalled roads. The total revenue is Rs. 42,000, of which Rs. 17,000 is derived from the land. The police force consists of 4 officers and 13 constables, and there is a jail with accommodation for 11 prisoners. The State also maintains a dispensary, a middle English school, and two lower primary schools.

Saraikelā.—Feudatory State of Chotā Nāgpur, Bengal, lying between 22° 29' and 22° 54' N. and 85° 50' and 86° 11' E., with an area of 449¹ square miles. It is bounded on the north by Mānbhūm District; on the east and west by Singhbhūm; and on the south by the State of Mayūrbhanj. It consists chiefly of an undulating plain dotted with small rocky hills; towards the east it is more hilly, and the higher ranges in the extreme north-east still contain valuable timber. The scenery throughout is wild and romantic in places. The forests altogether cover about 50 square miles, the chief tree being the *sāl* (*Shorea robusta*); *sabai* grass (*Ischaemum angustifolium*) grows in the forests. The State is drained by five streams: the Kharkai, the Sanjai, the Sonai, the Asuyā, and the Bhangbanga. The largest of these, the Kharkai, rises from a hill in Mayūrbhanj and flows northwards past Saraikelā village, which it skirts on its southern side, eventually joining the Sanjai, a tributary of the Subarnarekhā.

The first ruler of Saraikelā was Bikram Singh, a younger son of the Porāhāt Rāj family. Obtaining part of what is now the Saraikelā State as a fief, he quickly made himself independent. He and his descendants enlarged their dominions from time to time, and gradually eclipsed the parent family of Porāhāt in

¹ This figure, which differs from the area shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

power and importance. Saraikelā first came under the notice of the British in 1793, when, in consequence of disturbances on the frontier of the old Jungle Mahāls, its chief was compelled to enter into engagements relating to fugitive rebels. Ten years later, Lord Wellesley, the Governor-General, invited Kunwār Abhirām Singh, an ancestor of the present Rājā, to render assistance in the war against Raghuji Bhonsla of Nāgpur. In 1856 the Kunwār of Saraikelā received the personal title of Rājā Bahādur; and his services during the Mutiny were rewarded by a *khilat* and a rent-free grant in perpetuity of the sub-estate of Karaikelā, a portion of the escheated territory of the rebel Rājā of Porāhāt. The present chief of Saraikelā, Rājā Udit Nārāyan Singh Deo Bahādur, rendered assistance to the British Government in the Bonai and Keonjhar risings of 1888 and 1891; the title of Rājā Bahādur was conferred on him in 1884 as a personal distinction. Within the Saraikelā State are included the estates of Dugnī, Bānksai, and Ichā, which were originally maintenance grants to members of the ruling family. They pay no rent, but are subordinate to the chief. The administration is conducted by the chief, who exercises judicial and executive powers subject to the control of the Deputy-Commissioner of Singhbhūm and the Commissioner of the Chotā Nāgpur Division. He is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200, but sentences for more than two years' imprisonment require the confirmation of the Commissioner. Heinous offences requiring heavier punishment are dealt with by the Deputy-Commissioner. The present *sanad* of the chief was granted to him in 1899.

The population increased from 93,839 in 1891 to 104,539 in 1901, the density being 233 persons per square mile. The number of villages in the State is 816, the most important of which are Saraikelā (population, 3,711), the capital, which is administered as a municipality, and Sini, a junction on the Bengal-Nāgpur Railway. Hindus numbered 63,650 and Animists 39,956, the most numerous castes or tribes being the Hos (21,000), Santāls (20,000), and Kurmīs (15,000). Most of the inhabitants are supported by agriculture; rice is the staple food-grain, other crops raised being maize, pulses, and oilseeds.

Copper and iron are found, and nodular limestone is abundant. Slabs of rock, locally called *makrāsa*, which occur in some parts of the State, serve for building purposes. Copper-smelting by native methods was carried on twenty-five years

ago on a comparatively large scale, but has now been abandoned. Soapstone, slate, and mica are found in places. Cotton and *tasar* cloth, gold, silver and brass ornaments, copper trumpets, bell-metal cups and bowls, iron ploughshares, axes, vices, spades, shovels, knives, and locks are manufactured. The chief imports are cotton cloths, salt, kerosene oil, and spices; and the chief exports are rice, ropes, cotton, tamarind, *sabai* grass (*Ischaemum angustifolium*) and timber. The Bengal-Nāgpur Railway line runs from east to west across the north of the State. It is joined by the branch line to Asansol at Sini, where large iron and steel works are projected, to utilize ore from the Mayūrbhanj State. The State is traversed by the roads from Chaibāsa to Midnapore and Purūlia, which are kept up by the Singhbhūm road-cess committee; and a metalled road from Sini to Saraikelā is maintained by the chief. The total revenue of the State is Rs. 92,000, of which Rs. 72,000 is derived from the land. There is a police force of 11 officers and 25 men, and a jail with accommodation for 32 prisoners. The State also maintains a dispensary, 2 middle English, 3 upper primary, and 8 lower primary schools.

Boun-
daries, con-
figuration,
and hill
and river
systems.

Sikkim.—Native State in the Eastern Himālayas, lying between 27° 5' and 28° 9' N. and 87° 59' and 88° 56' E., with an area of 2,818 square miles. It is bounded on the north and east by Tibet; on the south-east by Bhutān; on the south by Darjeeling District; and on the west by Nepāl. The Tibetan name for Sikkim is pronounced Denjong, and more rarely Demojong or Demoshong; and the people are called Rong-pa, or 'dwellers in the valleys,' the term Mom-pa, or 'dwellers in the low country,' being used occasionally to describe the Lepchā inhabitants.

The main axis of the Himālayas, which runs east and west, forms the boundary between Sikkim and Tibet. The SINGĀLILĀ and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepāl on the west, and from Tibet and Bhutān on the east. From the eastern flank of the Singālilā range rise the great snow peaks of KINCHINJUNGA (28,146 feet), one of the highest mountains in the world; it throws out a second spur terminating at Tendong. The Chola range, which is much loftier than that of Singālilā, leaves the main chain at the DONGKYA mountain; it is pierced by several passes, the most frequented of which are the Tangkar La (16,000 feet), Natu La (14,200 feet), and JELEP LA (14,390 feet). Over the last named comes practically the whole trade between Bengal and Tibet. From the north-west face of the Dongkya moun-

tain an immense spur takes off and runs first west and then south-west to Kinchinjunga, forming the watershed of all the remote sources of the Tista. This spur has a mean elevation of from 18,000 to 19,000 feet; but several of its peaks, of which Chomiomo is one, rise much higher. Sikkim may be in fact described as the catchment area of the headwaters of the TISTA river. The whole of the State is situated at a considerable elevation within the Himālayan mountain zone, the ranges that bound it on three sides forming a kind of horseshoe, from the sides of which dependent spurs project, serving as lateral barriers to the Rangit and the Tista's greater affluents, the Lachung, Lachen, Zemu, Talung, Rongni, and Rangpo. These basins have a southward slope, being broad at the top where they leave the watershed, and gradually contracting, like a fan from its rim to its handle, in the Tista valley near Pashok. The rivers are very rapid and generally run in deep ravines, the ascent from the bank for the first few hundred feet being almost precipitous.

Sikkim is covered by gneissic rocks, except in the central Geology. portion where metamorphic rocks belonging to the Dāling series occur¹.

Sir Joseph Hooker divides the country into three zones, calling Botany. the lower up to 5,000 feet above the sea, the tropical; thence to 13,000 feet, the upper limit of tree vegetation, the temperate; and above to the perpetual snowline at 16,000 feet, the alpine. South of the Penlong La, where the Nepālese have been allowed to settle, the more productive sites have been cleared for cultivation up to 6,000 feet, the greatest height at which maize ripens; and trees ordinarily remain only in the rocky ravines and on the steepest slopes where no crops can be grown. The tropical zone is characterized by large figs, *Terminalia*, *Vatica*, *Myrtaceae*, laurels, *Euphorbiaceae*, *Meliaceae*, *Bauhinia*, *Bombax*, *Morus*, *Artocarpus* and other *Urticaceae*, and many *Leguminosae*; and the undergrowth consists of *Acanthaceae*, bamboos, several *Calami*, two dwarf *Arecae*, *Wallichia*, and *Caryota urens*. Plantains and tree-ferns, as well as *Pandanus*, are common; and, as in all moist tropical countries, ferns, orchids, *Scitamineae*, and *Pothos* are extremely abundant. Oaks, of

¹ *Journal, Asiatic Society*, Bengal, vol. xxxi, 'Journal of a Trip undertaken to explore the Glaciers of the Kinchinjunga Group in the Sikkim Himālaya,' by J. L. Sherwill; *Records, Geological Survey of India*, vol. xxiv, pts. i and iv, 'Extracts from the Journal of a Trip to the Glaciers Kabru, Pandim, &c.,' and 'The Geology and Mineral Resources of Sikkim, by P. N. Bose.

which (including chestnuts) there are upwards of eleven species in Sikkim, become abundant at about 4,000 feet ; and at 5,000 feet the temperate zone begins, the vegetation varying with the degree of humidity. On the outermost ranges, and on northern exposures, there is a dense forest of cherry, laurels, oaks, and chestnuts, *Magnolia*, *Andromeda*, *Styrax*, *Pyrus*, maple and birch, with an underwood of *Araliaceae*, *Holboellia*, *Limonia*, *Daphne*, *Ardisia*, *Myrsineae*, *Symplocos*, *Rubia*, and a prodigious variety of ferns. *Plectocomia* and *Musa* ascend to 7,000 feet. On drier exposures bamboo and tall grasses form the underwood. Rhododendrons appear below 6,000 feet, becoming abundant at 8,000 feet, while from 10,000 to 14,000 feet they form the mass of the shrubby vegetation. Orchids are plentiful from 6,000 to 8,000 feet and *Vaccinia* between 5,000 and 8,000 feet. The sub-alpine zone begins at about 13,000 feet, at which elevation a dense rhododendron scrub occupies the slopes of the mountains, filling up the valleys so as to render them impenetrable. In this zone the chief forms of the vegetation are *Gentiana*, *Primula*, *Pedicularis*, *Meconopsis*, and such-like genera, gradually changing to a Siberian flora, which at last entirely supersedes that of the sub-alpine zone and ascends above 18,000 feet.

Fauna.

The tiger is only an occasional visitor ; but the leopard (*Felis pardus*) and the clouded leopard (*F. nebulosa*) are fairly common, the latter ascending to about 7,000 feet. The snow leopard (*F. uncia*) inhabits the higher altitudes, while the marbled cat (*F. marmorata*) and the leopard cat (*F. bengalensis*) are found on the warmer slopes. The large Indian civet cat (*Viverra zibetha*) is not uncommon up to 5,500 feet, and the spotted tiger-civet (*Prionodon pardicolor*), though rare, occurs between 5,000 and 6,000 feet. A palm-civet (*Paradoxurus grayi*) is fairly common in the warmer forest. The cat-bear (*Aelurus fulgens*) occurs from about 7,000 feet upwards. The brown bear (*Ursus arctus*) is found at high altitudes, rarely below 11,000 or 12,000 feet, and the Himālayan black bear (*U. torquatus*) is common from that point down to about 4,000 feet. Though these are the only two bears recorded, the Lepchās assert the existence of a third species, possibly to be identified with *U. malayanus*. The sāmbar (*Cervus unicolor*) is frequent at all elevations up to 9,000 or 10,000 feet. The commonest of the deer tribe is the barking-deer (*Cervulus muntjac*), found from the lowest valleys up to 9,000 feet ; the musk deer (*Moschus moschiferus*) remains always at high elevations, rarely descending below 8,000 feet even in winter. The

serow (*Nemorhaedus bubalinus*) frequents the rockiest ravines over 6,000 feet, while the goral (*Cemas goral*) affects similar localities, but descends to 3,000 feet and is found up to 8,000. The *bharal* (*Ovis nabhura*) is found in considerable herds at high altitudes. An exceptionally large number of birds and butterflies occur in the State.

The climate varies between the tropical heat of the valleys and the alpine cold of the snowy ranges. The rainfall is very heavy, averaging 137 inches annually at Gangtok. From November to February the rainfall is light, and the weather in November and December is clear and fine. In March thunderstorms commence and, growing more and more frequent, usher in the rainy season, which lasts till October. Climate and rainfall.

Sikkim was known to early European travellers, such as Horace della Penna and Samuel Van de Putte, under the name of *Bramashon* (see Markham's *Tibet*, p. 64); while Bogle called it Demojong. Local traditions assert that the ancestors of the Rājās of Sikkim originally came from the neighbourhood of Lhāsa in Tibet. About the middle of the seventeenth century, the head of the family was named Püntso Namgye; and to him repaired three Tibetan monks, professors of the Nyingmapa (or 'red cap' sect of Buddhism), who were disgusted at the predominance of the Gelukpa sect in Tibet. These Lāmas, according to Mr. Edgar's Report, succeeded in converting the Lepchās of Sikkim to their own faith, and in making Puntso Namgye Rājā of the country. The *avatārs* of two of these Lāmas are now the heads, respectively, of the great monasteries of Pemiongchi and Tassiding. In 1788 the Gurkhas invaded Sikkim in the governorship of the Morang or *tarāi*, and only retired, in 1789, on the Tibetan government ceding to them a piece of territory at the head of the Koti pass. But in 1792, on a second invasion of Tibetan territory by the Gurkhas, an immense Chinese army advanced to the support of the Tibetans, defeated the Gurkhas, and dictated terms to them almost at the gates of Kātmāndu. History.

On the breaking out of the Nepāl War in 1814, Major Latter at the head of a British force occupied the Morang, and formed an alliance with the Rājā of Sikkim, who gladly seized the opportunity of revenging himself on the Gurkhas. At the close of the war in 1816, the Rājā was rewarded by a considerable accession of territory, which had been ceded to the British by Nepāl. In February, 1835, the Rājā granted the site of DARJEELING to the British, and received a pension of Rs. 3,000 per annum in lieu of it.

There was, however, a standing cause of quarrel between the Rājā and the paramount power, due to the prevalence of slavery in Sikkim; the Rājā's subjects were inveterate kidnappers, and the Rājā himself was most anxious to obtain from the British authorities the restoration of runaway slaves. With some notion of enforcing the latter demand, Dr. Campbell, the Superintendent of Darjeeling, and Dr. Hooker, the famous naturalist, were seized in 1849 whilst travelling in Sikkim, and detained for six weeks. As a punishment for this outrage the Rājā's pension was stopped, and a piece of territory, including the lower course of the Tista and the Sikkim *tarai*, was annexed. The practice of kidnapping Bengali subjects of the British Crown was, however, not discontinued; and two especially gross cases in 1860 led to an order that the Sikkim territory, north of the Rammān river and west of the Rangit, should be occupied until restitution was made. Colonel Gawler, at the head of a British force, with the Hon. Ashley Eden as envoy, advanced into Sikkim and proceeded to Tumlong, when the Rājā was forced to make full restitution, and to sign a treaty (in March, 1861) which secured the rights of free trade, of protection for travellers, and of road-making. For many years the State was left to manage its own affairs; but for some time prior to 1888 the Tibetans were found to be intriguing with the Mahārājā, who became more and more unfriendly. Affairs reached a climax in 1888, when war broke out with the Tibetans, who took up a position 11 miles within Sikkim territory. British troops were sent against them, and they were driven off with ease. In 1889 a Political officer subordinate to the Commissioner of the Rājshāhi Division was stationed at Gangtok to advise and assist the Mahārājā and his council; and this was followed in 1890 by the execution of a convention with the Chinese, by which the British protectorate over Sikkim and its exclusive control over the internal administration and foreign relations of the State were recognized. Since the Tibetan expedition of 1904, the Political officer has been directly responsible to the Government of India. The Mahārājā receives a salute of 15 guns.

The
people.

After the appointment of the Political officer in 1889 communications were greatly improved by the construction of roads and bridges, and the settlement of Nepālese was permitted in certain parts of the State. These measures were followed by a rapid development of the country. Settlers from Nepāl flocked in, and the population, which in 1891 was returned at 30,458, had grown ten years later to 59,014, an

increase of 93·7 per cent. The first Census was admittedly incomplete ; but a great deal of the increase is accounted for by the growth of the immigrant population, as of the total inhabitants in 1901 no fewer than 22,720, or 38·5 per cent., had been born in Nepāl. In addition, the climate is good ; there have been no serious epidemics ; the people have been prosperous and they are very prolific, the crowds of children being a striking feature of every Sikkim hamlet. The State is still very sparsely populated, having a density of only 21 persons per square mile ; but a great quantity of waste land is fit for cultivation, and it is probable that the population will continue to grow at a very rapid rate. As elsewhere where the Mongoloid element of the population preponderates, there is a great excess of males over females. The principal diseases are fever, diseases of the respiratory system, worms, bowel complaints, and skin diseases. Deaf-mutism is far more common than elsewhere in Bengal. The Census of 1901 returned 125 villages ; but in reality Sikkim contains few true villages, except in the Lachen and Lachung valleys in the north of the State. Here the houses, somewhat similar in appearance to Swiss chalets, cluster together in the valley bottoms. In southern Sikkim the nearest approach to villages is to be found in the groups of houses near the Mahārājā's palaces at Tumlong and Gangtok ; round some of the larger monasteries, such as Pemiongchi, Tassiding, and Pensung ; and at the copper-mines of Pache near Dikyiling, and the bazars at Rangpo, Rhenok, Pakhyong, Namchi, Mānjhītār, Tokul, and Seriong. Khaskura is the dialect of 27 per cent. of the population, while most of the others speak languages of the Tibeto-Burman family, including Bhotiā, Limbū, Lepchā, Murmī, Mangar, Khambū, and Newār. Of the total population, 38,306, or 65 per cent., were Hindus, and 20,544, or nearly 35 per cent., Buddhists. Buddhism, which is of the Tibetan or Lāmaist type, is the State religion of Sikkim, which contains about 36 monasteries. Most of the Buddhists are members of the two main indigenous castes, Lepchās and Bhotiās (8,000 each). The Lepchās claim to be the autochthones of Sikkim proper. Their physical characteristics stamp them as members of the Mongolian race, and certain peculiarities of language and religion render it probable that the tribe is a very ancient colony from southern Tibet. They are above all things woodmen, knowing the ways of birds and beasts and possessing an extensive zoological and botanical nomenclature of their own. The chief Nepālese tribes represented are the Khambū, Limbū,

Murmī, Gurung, Khas, Kāmi, Mangar, Newār, and Damai. The great majority of the population (92 per cent.) are supported by agriculture.

Christian missions. In 1901 Christians numbered 135, of whom 125 were natives. The missions at work in the State are the Church of Scotland Mission and the Scandinavian Alliance Mission.

Agriculture. By far the most important crop is maize, which occupies a larger area than all the other crops together; it is estimated to cover 94 square miles. After maize, the largest areas are under *maruā*, buckwheat, rice, wheat, and barley, which are estimated to cover from 4,000 to 12,000 acres each. Cardamoms, grown on about 600 acres, are a valuable crop. Cultivation has rapidly extended in recent years, but a large quantity of cultivable waste still remains. Plantains, oranges, and other fruits are grown in the gardens, and the Government apple orchards started at Lachung and Lachen are proving a success. Cattle, yaks, and sheep of various kinds are bred in the State and are also imported from Tibet.

Forests. The principal trees have been enumerated in the section on Botany. The forests have suffered much from promiscuous cutting, and also from fires caused by villagers when clearing ground for cultivation. An attempt is now being made to introduce a proper system of forest conservancy. Pine, *tūn* (*Cedrela Toona*), *Cryptomeria*, fir, alder, beech, chestnut, and a few other kinds have been raised in nurseries for planting by the roadsides; and an avenue of 150 rubber-trees planted at Singtam is doing well. The receipts from forests in 1903-4 were Rs. 19,000, derived chiefly from the sale of railway sleepers and tea-box planking; the expenditure in the same year was Rs. 12,000.

Minerals. Copper ores are very widespread in Sikkim. The ore is copper pyrites, often accompanied by mundic, and occurs chiefly in the Dāling beds. It is generally disseminated in slates and schists, and seldom occurs in true lodes. The analysis of a sample taken at random from the deeper part of a copper mine at Pachikhani gave 20.3 per cent. of copper. Some ores have been recently smelted and exported for sale on a small scale under State supervision, but the experiments have not proved remunerative. Iron occurs chiefly as pyrites, being most plentiful at Bhotang, where magnetite is also found; but it has not yet been put to any economic use. Garnet is in places abundant in the gneiss and mica schists, but it is of poor quality.

A weaving school at Lachung has done well; tweed suitings

and blankets are the chief articles made. There are several trade routes through Sikkim from Darjeeling District into Tibet; but, owing partly to the natural difficulties of the country and partly to the jealousy of the Tibetan authorities, trade over these roads has never been fully developed. In the convention of 1890 provision was made for the opening of a trade route; but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the dispatch of a mission to Lhāsa, where a new convention has been signed. In 1902-3 the total value of the trans-frontier trade was 19 lakhs, the principal imports being wool, musk, and yaks' tails, and the principal exports cotton piece-goods, woollen cloths, silk, tobacco, copper, iron, and other metals, Chinese caps, china-ware, maize, and indigo. In 1903-4, when trade was disorganized, the value fell to 7½ lakhs.

Good roads, properly bridged throughout, have been opened since 1889 from Pedong in British territory to the Jelep La and to Tumlong; and in 1903-4 the State contained 376 miles of road. A cart-road has recently been constructed from Rangpo to Gangtok from Imperial funds, and a mule-track on a gradient of 1 in 15 has been made from Gangtok to Chumbi via the Natula. Iron bridges have been constructed across the Tista, the Rangit, and other streams.

The Political officer, who is stationed at Gangtok, advises and assists the Mahārājā and his council, but no rules have yet been laid down for the civil and criminal administration. The landlords referred to in a later paragraph exercise a limited civil and criminal jurisdiction within the lands of which they collect the revenue, but all important cases are referred to the Mahārājā or the Political officer. Those referred to the Mahārājā are decided by him in consultation with his ministers (*lōmpo*), at present five in number, two of whom are always in attendance on him. Appeals are heard by the Mahārājā sitting with one or more members of his council, or by a committee of the council. Capital sentences passed by other authorities require the confirmation of the Mahārājā. The annual budget estimates of income and expenditure are, in the first instance, approved by the Mahārājā and his council, and are then submitted for the sanction of the Government of India by the Political officer.

The total receipts in 1902-3 amounted to 1.58 lakhs, of which Rs. 61,000 was derived from the land, Rs. 37,000 from excise, Rs. 25,000 from forests, and Rs. 10,000 under the head of agriculture, of which Rs. 9,000 was derived from cardamom

rents. In 1903-4 a great demand for labour was created by the Tibet mission and many villagers left their houses; a marked decrease in the collections of land and excise revenue resulted, and the total receipts dropped to 1.54 lakhs. The excise revenue is mainly derived from the fees charged for licences to brew *pachwai* or rice-beer for home consumption, and from the fees charged for the manufacture and sale of country spirit; the manufacture of the latter is conducted on the out-still system.

Land
revenue.

The collection of the land revenue is in the hands of landlords variously known as Kāzī landlords (numbering 21), Lāma landlords (13), and *thikadārs* (37). Under these are village headmen (styled *pipōn* in Bhotiā, *tassa* in Lepchā, and *mandal* in Khaskura), each headman being over those ryots whom he or his predecessors have introduced. The sum payable by each ryot is fixed by an informal committee of headmen and villagers, presided over by the landlord and his agent. The rate now allowed to the landlord is 14 annas per *pathi* (about 4 seers) of seed for Nepālese ryots, and 8 annas per *pathi* for Lepchā and Bhotiā ryots. In maize and other 'dry' lands of fair quality about 4 *pathis*, and in terraced rice lands about 6 *pathis*, go to the acre. Terraced rice lands, however, more often pay produce rents on the *kuth* system, one-fourth of the out-turn being taken by the landlord. New land pays no rent for three years, in consideration of the labour involved in constructing the terraces. The *pathi* and *kuth* systems were introduced from Nepāl and have now been adopted throughout the greater part of Sikkim. The monasteries, however, and some of the Sikkim Kāzīs still maintain the old practice of assessing each household according to its circumstances. Each landlord pays to the State a sum fixed at the commencement of his lease. A man can settle down and cultivate any land he may find unoccupied without any formality whatever; and when once he has occupied the land, no one but the Mahārājā can turn him out. The latter, however, can eject him at any time; and if he ceases to occupy the land, he does not retain any lien upon it, unless he pays rent for it as though he had cultivated it. In the Lachung and Lachen valleys the system is peculiar. Here the assessment on each village is communicated each year to the *pipōn*, or village headman, who collects the rents but gets nothing for his trouble except exemption from the obligation of carrying loads and from the labour tax. The *pipōn* calls a committee of all the adult males over fifteen years of age at the end of

the year and, in consultation with them, fixes what each individual should pay, having regard to his general condition, the number of his cows, mules, ponies, and yaks, and the quantity of land in his possession. There are no fixed rates; but the assessment on animals appears to work out at about 3 annas for each cow or yak, and 4 annas for each mule or pony. In the upper part of Lachung the villagers redistribute the fields among themselves every three years by lot, the richer people throwing for the big plots and the poorer villagers for the small ones. Grazing lands are divided in the same way, but not the house and homestead. The Lāmas are not bound to labour for the Mahārāja, and they pay no dues of any kind, no matter how much land may be cultivated by themselves or their bondsmen.

The State maintains a small force of military police, composed of one *havildār*, 3 head constables, and 16 *naiks* and constables. A jail with accommodation for 24 prisoners has recently been built at Gangtok. Police and jails.

Of the total population, 5 per cent. (9.5 males and 0.3 females) could read and write in 1901. A school is maintained at Gangtok; in 1903-4 it had 37 pupils on its rolls, and the expense of maintenance was Rs. 2,000. Education.

A civil hospital has been constructed at Gangtok and a Medical dispensary at Chidam. In 1903-4 these were attended by 14,000 patients, and 153 operations were performed. In addition to this, 1,500 persons were vaccinated during the year. The medical charges borne by the State were Rs. 4,000. Medical.

[*Aitchison's Treaties*, vol. i, 3rd Edition (1892); W. T. Blanford, 'Journey through Sikkim,' *Journal, Asiatic Society of Bengal*, vol. xl, part ii, p. 367 (1871); *Journal of the Royal Asiatic Society*, September (1873); Abbé C. H. Desgodins, *La Mission du Tibet* (Verdun, 1872); Sir J. Ware Edgar, *Report on a Visit to Sikkim and the Tibetan Frontier in 1873* (Calcutta, 1874); Col. J. C. Gawler, *Sikkim* (1873); Sir J. D. Hooker, *Himalayan Journals* (1854); Colman Macaulay, *Report of a Mission to Sikkim and the Tibetan Frontier* (Calcutta, 1885); *Gazetteer of Sikkim* (Calcutta, 1894).]

Chola.—Pass in the Chola range of the Eastern Himālayas, 14,500 feet above the sea, situated in 27° 25' N. and 88° 49' E., leading from Sikkim State to the Chumbi valley in Tibet.

Dongkya.—Mountain on the boundary between Sikkim and Tibet, situated in 27° 59' N. and 88° 48' E., 50 miles east of Kinchinjunga, where the Chola range leaves the main chain of the Himālayas. Height, 23,190 feet above sea-level. The

well-known Dongkya pass (elevation 18,400 feet) at the head of the Lachung valley is 4 miles west of Dongkya peak.

Gangtok.—Capital of Sikkim State, Bengal, situated in $27^{\circ} 20' \text{ N.}$ and $88^{\circ} 38' \text{ E.}$ Population (1901), 749. Gangtok contains the residence of the Mahārājā and other public buildings. It is connected with the Tista valley by a cart-road.

Jelep La.—Pass in the Chola range of the Himālayas, situated in $27^{\circ} 22' \text{ N.}$ and $88^{\circ} 53' \text{ E.}$, leading from Sikkim State, Bengal, into the Chumbi valley of Tibet. Height, 14,390 feet above sea-level. The Jelep pass forms the principal route by which Tibetan trade enters British India, and carries about half of the total registered trade between India and Tibet.

Kinchinjunga (*Kānchenjungā*).—Mountain, second only to Everest in elevation, situated in the Eastern Himālayas, on the Sikkim-Nepāl boundary ($27^{\circ} 42' \text{ N.}$, $88^{\circ} 9' \text{ E.}$), its summit attaining an altitude of 28,146 feet above sea-level.

‘The geological position of *Kānchenjungā* is obviously in the main axis of the Himālayas, although that mountain lies considerably to the south of the line of water-parting between the Tibetan plateau and India, and on a spur which runs at right angles to this line, so that even the drainage of its northern slopes flows directly down into the Indian plains. . . . The name *Kānchenjungā* is Tibetan, and means, literally, “The Five Repositories of the Great Glaciers,” and it is physically descriptive of its five peaks. . . . The Lepchā name of this mountain is Kong-lo-chu, or “The Highest Screen or Curtain of Snows.” (Waddell, *Among the Himalayas*, 1899.)

Boun-
daries, con-
figuration,
and hill
and river
systems.

Bhutān.—Independent State in the Eastern Himālayas, lying between $26^{\circ} 41' \text{ and } 28^{\circ} 7' \text{ N.}$ and $88^{\circ} 54' \text{ and } 91^{\circ} 54' \text{ E.}$ It is bounded on the north by Tibet; on the east by the Towang country, a narrow outlying dependency of Tibet that stretches southwards to the confines of Assam; on the south by Goālpāra, Kāmṛp, and Jalpaiguri Districts; and on the west by the Chumbi Valley, the State of Sikkim, and Darjeeling District.

The lofty peaks and ranges of the Himālayas extend along the whole of the northern boundary of Bhutān, and great spurs stretch southwards from the main chain along its eastern and western boundaries. Within these mighty natural barriers is a succession of hill ranges, the general direction of which in Western Bhutān is from north-west to south-east and in Eastern Bhutān from north-east to south-west. The ridges are mostly

steep, and separated from each other by deep valleys running far back into the mountains. The Dongkya range, which divides Sikkim from the Chumbi Valley, bifurcates at Gipmochi (on the western shoulder of which is the trijunction point of the Sikkim-Bhutān-Tibet boundary) into two great spurs, one running to the south-east and the other to the south-west, including between them the valley of the Di-chu¹ or Jaldhākā river. From CHUMALHARI on the Tibetan boundary at the north-west corner of Bhutān another ridge strikes southwards between the basins of the Torsā (the Chumbi Valley) and Raidāk rivers, and terminates in the SINCHULĀ hills which form the boundary between Jalpaiguri District and Bhutān. Farther east very little is known of the main chain, but it has been ascertained that its chief offshoots trend southwards. These include the Black mountain range, with ramifications south-west and south-east in the Tongsa division; the Yato La, from peak B (24,737 feet) north of Tongsa; the Rudu La range; the Donga range, from a peak north of Donga La (20,965 feet); the Kollong range, from the Daud peak (20,576 feet); and, in the extreme east, a range springing from the three peaks E (21,278 feet), F (23,066 feet), and H (22,422 feet), with ramifications in a south-east direction, on one of which Dewāngiri is situated. The last-mentioned range probably forms the true boundary between Bhutān and Towang. This mountainous region sends out numerous rivers in a more or less southerly direction, all of which eventually find their way into the Brahmaputra. Their courses in Bhutān are confined between high rocky mountains; and as the gradients of their beds have a very steep fall, they become furious torrents in the rains, and hardly any of them are fordable at this period of the year. Proceeding from west to east, the chief rivers are the Di-chu, Amo-chu or TORSĀ, Chin-chu, Ma-chu, Mati-chu, and Dangme-chu. The Di-chu, which rises in a lake near Gipmochi, forms the boundary between Bhutān and Darjeeling District during the last twelve miles of its course in the mountains. The Amo-chu rises below the Tang pass, which forms the connecting link across the Tibetan table-land of the main range of the Himālayas and also the watershed between the streams running northwards and southwards, and after flowing through the Chumbi Valley for about 6 miles enters Bhutān. Soon after it runs through a steep and narrow gorge, and below this through a valley which is believed to have an easy gradient, and which has been prospected for a road connecting Tibet with Bengal.

¹ *Di* is the Bodo and *chu* the Tibetan word for 'water' or 'river.'

The Chin-chu rises in the eastern and southern slopes of the Chumalhari range, and, after flowing in a south-easterly direction for about 200 miles through Bhutān, enters the Duāis not far from the eastern border of Jalpaiguri, where it is known as the Ninagaon. The Ma-chu rises in Tibet, and, after a course in Bhutān of about 180 miles past Punaka, debouches on the borders of Jalpaiguri and Goālpāra, where it is called the San-kosh. The Dangme-chu, which is believed to rise in Tibet, flows in a south-westerly direction through Bhutān, and on emerging into the plains, where it is known as the Manās, once formed the boundary between the Kāmṛup and Goālpāra Districts of Assam.

Geology. As far as is known, the lower mountain ranges are composed chiefly of a coarse and decomposing granite sandstone. Gneiss, hornblendic slate, micaceous slate, and brown and ochre-coloured sandstones form the boulders in the beds of the streams in the ascent from the plains. The rocks at the highest elevation consist of gneiss, rising through upheaved strata of mica and talcose slate. At an elevation of 8,000 or 9,000 feet a talcose slate has been observed, thickly disseminated with garnets and in some cases threaded with large grains of titaniferous iron ore. Limestone formations on a large scale extend from Chingi to Santso, and another limestone formation from Pomekpu to Tassisūdra and thence to the plains at Buxa.

Botany. Above 5,000 feet the mountain slopes are generally covered with forest abounding in many varieties of stately trees, including the beech, ash, birch, maple, cypress, and yew. At an elevation of 8,000 or 9,000 feet is a zone of vegetation consisting principally of oaks and rhododendrons, and above this again a profusion of firs and pines.

Fauna. The lower ranges of the hills teem with animal life. Tigers are not common, except near the Tista river, but elephants are so numerous as to be dangerous to travellers. Leopards abound in the valleys and deer everywhere, some of them of a very large species. The musk deer (*Moschus moschiferus*) is found in the snows, and the barking-deer (*Cervulus muntjac*) on every hill-side. Wild hog are met with even at great elevations. Bears and rhinoceros are also found. Large squirrels are common, and pheasants, partridges, jungle-fowl, pigeons, and other small game abound.

Climate and rain-fall. The climate of Bhutān varies with the elevation: the cold of Siberia, the heat of Africa, and the pleasant warmth of Italy may all be experienced in the course of a single day's journey. At the time when the inhabitants of Punaka are afraid of

exposing themselves to the blazing sun, those of Ghāsa experience all the rigour of winter and are chilled by perpetual snows. Yet these two places are within sight of each other. The rains descend in floods upon the heights, but in the vicinity of Trashi-chod-zong and Punaka they are moderate; there are frequent showers, but nothing that can be compared to the tropical rains of Bengal. Owing to the great elevation and steepness of the mountains, terrible storms arise among the hollows, which are often attended with fatal results.

Bhutān has not long been in the possession of its present History. rulers. It formerly belonged to a tribe called by the Bhotiās Tephū, who are believed to have been of the same race as the Kachāris and Koch of the adjoining plains, and who were subjugated about two centuries ago by a band of Tibetan soldiers. The latter settled down in the country and intermarried with the aborigines, and from them have sprung the people now called Bhotiās. There are still various servile tribes in the country regarding whom very little is yet known, but we may surmise that they are descended from more or less pure remnants of the earlier inhabitants. The relations of the British with Bhutān commenced in 1772, when the Bhotiās invaded the principality of Cooch Behār. The ruler of that State invoked British aid, and a force was dispatched to his assistance under Captain James, who expelled the invaders and pursued them into their own territory. Peace was concluded in 1774 through the mediation of the Tashi Lāma, then regent of Tibet. In 1783 Captain Turner was deputed to Bhutān, with a view to promoting commercial intercourse, but his mission proved unsuccessful. From this period few dealings took place with Bhutān until the occupation of Assam by the British in 1826. It was then discovered that the Bhotiās had usurped the strip of lowland lying along the foot of the mountains, called the Duārs or passes, and for these they agreed to pay a small tribute. They failed to do so, however, and availed themselves of the command of the passes to commit depredations in British territory. Captain Pemberton was deputed to Bhutān to adjust the points of difference, but his negotiations yielded no result; and every other means of obtaining redress and security having proved unsuccessful, the Assam Duārs were taken from the Bhotiās, and, in lieu of them, an annual payment of Rs. 10,000 was promised to the hillmen so long as they behaved peaceably. They continued, however, to commit acts of outrage and aggression; and in spite of repeated remonstrances and threats, scarcely a year passed without the occur-

rence of several raids, often headed by Bhutānese officials, in which they plundered the inhabitants, massacred them, or carried them away as slaves.

In 1863 the Hon. Ashley Eden was sent as an envoy to Bhutān to demand reparation for these outrages. He was there subjected to the grossest insults, and under compulsion signed a treaty surrendering the Duārs to Bhutān and making many other concessions. On his return the Governor-General at once disavowed the treaty, stopped the allowance previously given for the Assam Duārs, and demanded the immediate restoration of all British subjects kidnapped during the previous five years. As this demand was not complied with, the Governor-General issued a proclamation, dated November 12, 1864, annexing the Western Duārs. No resistance was at first offered to the annexation; but in January, 1865, the Bhotiās made an unexpected attack on Dewāngiri, and the small British garrison abandoned the post with the loss of two mountain guns. This disaster was soon retrieved by General Tombs, and the Bhutān government was compelled to sue for peace, which was concluded on November 11, 1865. In the year following, it formally ceded all the eighteen Duārs of Eastern Bengal and Assam, and agreed to liberate all kidnapped British subjects. As the revenues of Bhutān mainly depended on these Duārs, the British Government, in return for these concessions, undertook to pay an allowance beginning at Rs. 25,000 a year and rising in three years to a maximum of twice that amount, provided that the Bhotiās abstained from fresh breaches of peace. Since then relations with Bhutān have been almost uninterruptedly satisfactory. On the occasion of the Tibet mission of 1904, the Bhotiās gave strong proof of their friendly attitude. Not only did they consent to the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop, accompanied the British troops to Lhāsa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained the British Agent hospitably at his capital.

The
people.

Previous to the British annexation of the Duārs, the area of the State was reckoned at about 20,000 square miles. The population in 1864 was estimated to be about 20,000. Later information, however, points to a larger figure, and it is believed that the tract west of the Amo-chu alone contains about 15,000 persons. The chief towns are PUNAKA or Dosen, the winter capital, on the left bank of the Būgni river, 96 miles east-north-east from Darjeeling, TRASHI-CHOD-ZONG, the summer head-

quarters, PARO, Wangdu Potrang, and Tongsa on the road from Assam to Lhāsa. The other towns are Wandipur, Ghāsa, and Murichom. The population west of the Amo-chu consists almost entirely of Nepālese, who have been driven out of their own country by the pressure of population on the soil and have flocked into Bhutān, as well as into Darjeeling District and Sikkim, for many years past. Now that the best lands in Darjeeling and much of the good land in Sikkim have been filled up, the movement towards Bhutān, where there is still plenty of waste, is stronger than ever. These immigrants are not well treated by the Bhotiās, but their condition is better than it used to be, now that the Bhutān officials have begun to realize the extent to which they increase the revenue ; and for a few years at any rate, until the colonist is settled and has made money, he is left in comparative peace by his rulers. East of the Amo-chu, the Bhutān ryots have successfully objected to the Nepālese being allowed to take up land, on the ground that once admitted they would swamp the old inhabitants. The objection seems a reasonable one, since the Nepālese, if once admitted, would cultivate many of the Bhutān grazing grounds that are below 7,000 feet elevation, and would confine the cultivation of the latter within much narrower limits than at present.

The population of Bhutān consists of three classes : the priests, the chiefs or Penlops (including the governing class), and the cultivators. The Bhotiās are most at home among their cattle and mules, and are generally apathetic and backward in agriculture. Physically they are a fine race, hardy and vigorous, with dark skins, ruddy complexions, and high cheek-bones ; but they are dirty in their habits and persons. They are courageous, but truculent and prone to sudden bursts of anger and murder. Robbery and other kinds of violence are common. Their food consists of meat, chiefly pork, mutton, and yak's flesh, turnips, rice, barley-meal, and tea made from the brick-tea of China. Their favourite drink is *chang* distilled from rice or barley and millet, and *maruā* beer made from fermented millet ; all classes are very much addicted to the use of these liquors. Priests and laymen, men and women, all wear close-cropped hair, a feature which distinguishes the Bhotiās of Bhutān from their cousins in Tibet and Sikkim, among whom, except by priests, the pigtail is universally worn. A loose woollen coat reaching to the knees, and bound round the waist by a thick fold of cotton cloth or leather belt, forms the costume of the men. A legging of broadcloth is attached to a

shoe, made generally of buffalo hide, and no Bhotiā ever travels during the winter without protecting his legs and feet against the effects of snow. A cap made of fur or coarse woollen cloth completes the outfit. The women's dress is a long cloak with loose sleeves. The houses in appearance resemble Swiss chalets, and are picturesque and comfortable, but outside the towns they are seldom more than two storeys high. The Bhotiās are neat joiners, and their doors, windows, and panelling are excellent. No ironwork is used; the doors open on ingenious wooden hinges, and all the floors are neatly boarded with deal. On two sides of the house is a veranda, painted and ornamented with carved work. The only defect is the absence of chimneys, which the Bhotiās do not know how to construct.

Language. The Bhutān spoken language is a dialect of Tibetan, but it is subject to great local variations, owing to the mountain barriers which impede free communication between different parts. In the west the dialect is closely akin to that of Sikkim and Kālimpong, but the pronunciation is sharper and more abrupt. The Tibetans and Sikkimese say that the Bhutān speech resembles that of a man talking in anger, and there is no doubt that the temper of the people is reflected in their mode of talk. The written language of books is the same as that of Tibet; and by means of it the native of Bhutān can communicate with the Kam-pa Tibetan living on the confines of China, and with the Ladākhi on the borders of Kashmīr.

Religion. The people profess to be Buddhists; but their religion, as is the case in Tibet also, partakes largely of the old Bom-po or religion which preceded Buddhism. This consists chiefly of devil-worship, and of propitiatory sacrifices in which animal life is freely taken, a proceeding abhorrent to the true followers of Buddha. The sacred books of the Buddhist, or rather of the Lāmaist religion, are brought from Tibet; they are frequently recited but seldom understood. The local priests excel in the painting of religious pictures, and many of the best pictures in the Sikkim monasteries are the work of Lāmas from Bhutān.

Agriculture. From the configuration of the country, regular husbandry is limited to a comparatively few spots. The chief crop is maize, which is found up to 7,000 feet; wheat, *maruā*, buckwheat, and mustard are also grown. Cultivation is in a backward state, even in those places where it has existed longest. The most paying crops in the country are cardamoms and terraced rice, but both these require irrigable land and so involve a large outlay on the part of the cultivator. Large areas of suitable

land exist in which the means of irrigation are abundant, but property is very insecure and the cultivator hesitates to incur the necessary expenditure.

The forests have a certain value as grazing grounds, and many of the graziers who supply Darjeeling town with milk send their cows when off milk to the forests at the head of the Di-chu. A species of pony, called *tangan* from Tangasthān, the general appellation of that assemblage of mountains which constitutes the territory of Bhutān, is found in this tract, the same name being applied to similar ponies in parts of Nepāl. The *tangan* pony usually stands about 13 hands high, and is short-bodied, clean limbed, deep in the chest, and extremely active. Cattle and ponies.

Bhutān is a fairly good country for an ordinary cultivator, so long as he does not grow rich. There is, however, no security of property; and if cultivators amass wealth, they are afraid to show any signs of it, for fear lest they should be mulcted on trivial pretexts, such as the wearing of clothes beyond their station, or the possession of ponies which they have not sent to carry the Kāzī's loads. Among the reasons which induce the Nepālese to migrate into Western Bhutān in the face of these disadvantages, may be mentioned the plentiful supply of land, and the absence of all restrictions on taking it up and clearing it, on burning down or cutting trees, and on brewing and selling all kinds of liquor. The promiscuous burning of jungle and felling of timber will, however, before long leave them much worse off than if they had been subjected to the restrictions which the British administration imposes in these respects. Material condition.

In so rude a country, the manufactures of the people are very primitive, and the few articles produced are all destined for home consumption. Coarse blankets and cotton cloth are made by the villagers inhabiting the southern tract. Leather, from the hide of a buffalo, imperfectly tanned, furnishes the soles of snow-boots. Bowls are neatly turned from various woods. A small quantity of paper is made from a plant described as the *Daphne papyrifera*. Swords and daggers, and sheaths made of copper, brass, or silver, iron spears, arrow-heads, charm boxes, and *pān* boxes, cauldrons, and agricultural implements complete the list of manufactures. Arts and manufactures.

In 1775 Mr. Bogle obtained the consent of the Deb Rājā to free trade between Bhutān and the territories of the East India Company; and by Article IX of the Sinchulā Treaty of 1865 it was agreed that there should be free trade and commerce

between the two Governments. Except, however, for a few years during the administration of Warren Hastings, Bhutān has remained practically closed to British traders. The Bhotiās, on the other hand, have been permitted to come freely into British territory; and fairs to promote trade have been established and subsidized at KĀLIMPONG in Darjeeling, and FĀLĀKĀTA and ALĪPUR in Eastern Bengal, and at DEWĀNGIRI and UDALGURI in Assam. In 1902-3 the value of the exports from Bhutān into Bengal was 4.17 lakhs, and of the imports 1.16 lakhs. The chief exports are timber and oranges; and the chief imports are European piece-goods, manufactured silk, betel-nuts, and tobacco. Other exports are ponies and mules, cattle, sheep, musk, *gñi*, silk, tea, wax, manufactured piece-goods, yaks' tails, madder, hides, ivory, lac, and rubber.

Communi-
cations.

Practically the only means of communication are a few rough tracks on which ponies can be ridden. Under a recent arrangement with the Bhutān government, the country between the valleys of the Amo-chu (Torsā) and the Di-chu (Jaldhākā) has been prospected for a road or mule track, the construction of which is now under consideration. A survey has been completed from Nāgrākāta on the Bengal-Duārs Railway to Chumbi; and the road, if sanctioned, will connect Tibet with the plains of Bengal, leaving Chumbi above the gorge in Bhutān through which the Amo-chu flows, crossing the intervening range at an elevation of under 10,000 feet, and reaching the plains at the point where the Di-chu enters Jalpaiguri District.

Adminis-
tration.

At the head of the Bhutān government there are nominally two supreme authorities: the Dharma Rājā, known as Shap-trung Renīpoche, the spiritual head; and the Deb or Depa Rājā, the temporal ruler. The Dharma Rājā is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there several hundreds. On the death of a Dharma Rājā a year or two is allowed to elapse, and his reincarnation then takes place, always in the Chōje, or royal family of Bhutān. It is believed that on the day of his rebirth a slight shower of rain falls from a clear sky, and a rainbow appears above the house in which he is born. The parents report his birth to the local chief. When he is about three years old and able to speak a little, he is expected to give particulars as to the property of his monastery, the Talo *göm-pa* near Punaka, and to identify the rosary, books, and other articles used by him in religious ceremonies in his former life from among similar articles used by other monks.

The chief council, called the *shung lhengye*, is composed of the Dharma Rājā and the Deb Rājā, the Penlops of Tongsa, Paro, and Tagapa, and the Jongpens of Timpu and Punaka; it assembles only for questions of national importance, such as the levying of war or other grave matters. A subordinate council for the disposal of less important matters is, when sitting at Punaka, constituted from the Deb's *zimpon*, who is a sort of private secretary to the Deb Rājā, the *shung dronyer*, and either the Punaka or the Timpu Jongpen; in the case of meetings held at Trash-chod-zong, the summer capital, an official known as the *kalapa* takes the place of the Punaka Jongpen.

The Deb Rājā is in theory elected by the council, but in practice he is merely the nominee of whichever of the two governors of Western or Eastern Bhutān (the Penlops of Paro and Tongsa) happens for the time to be the more powerful. At present the Tongsa Penlop controls all public affairs in the name of the Deb Rājā. The chief officials at Tongsa subordinate to him are the *dronyer*, who remains in charge of the *jong* in his absence, his *zimpon* or private secretary, and the *depōn* or *dapōn*, who commands the soldiers and police (*simkap*). The subordinate officers in Western Bhutān consist, in addition to a number of officials at Paro, of Kāzīs who are Bhotiās and of *thikadārs* who are Nepālese; these live in the interior and are responsible for the collection of revenue. The Kāzīs have power to dispose of cases and to impose fines, and only serious cases are sent to Paro for trial. Though there is thus an outward show of government, the local officials are but imperfectly controlled by the central power; and murder, robbery, and other crimes of violence are common. The State is in direct relations with the Government of India, through the medium of the Political officer in Sikkim.

The Bhotiās in Western Bhutān pay a cultivation tax in grain Revenue. and also a tax in butter on their cattle farms. The Nepālese and Lepchā ryots pay a poll tax of Rs. 6-8 per annum for each house, in addition to a labour tax of Rs. 3 per annum for each house, if loads are not carried free of charge according to the Kāzī's requisitions, and a grazing charge of about R. 1 per annum for each 15 to 20 head of cattle grazed in the forests near the villages. This last tax is paid by the Nepālese headmen to the Bhutānese inhabitants as a fee for grazing in the jungles originally occupied by the latter alone. In addition, there are various irregular charges, chiefly fines levied by the officials on the most trivial prettexts, which often swell the expenses, especially of rich ryots, to a very high figure.

Army.

Local levies under the control of the different chiefs can, nominally be called out by the Deb Rājā; but it is estimated that the total number of fighting men does not exceed 9,500, and that the number that can be concentrated at one place does not exceed 4,000 or 5,000 men. As a militia these levies are of a worthless description; they are seldom mustered for drill and are lacking in discipline, while the officers have no knowledge of strategy or tactics. Their arms consist of matchlocks, bows and arrows, slings, and *daos*, with a few breech-loading rifles.

Education.

The population is generally illiterate. Facilities have been given by the Government of Bengal for a few young Lāmas to attend the Bhotiā boarding-school at Darjeeling, but no advantage has been taken of these by Bhotiās from Bhutān.

[S. Turner, *Account of an Embassy to the Court of the Tashi Lāma in Tibet* (1880); R. B. Pemberton, *Report on Bhutān* (Calcutta, 1839); Ashley Eden, *Report on the State of Bhutān* (Calcutta, 1864), and *Political Missions to Bhutān* (Calcutta, 1865); C. R. Markham, *Mission of Bogle to Tibet and Journey of Manning to Lhāsa* (1879).]

Chumalhari.—Snow peak on the boundary between Tibet and the north-western corner of the State of Bhutān, situated in 27° 50' N. and 89° 16' E., 23,933 feet above sea-level. Chumalhari is known as one of the most sacred mountains in Tibet.

Chumurchi.—Village in the south-west of the State of Bhutān, situated in 26° 55' N. and 89° 7' E.

Paro.—Town in the State of Bhutān, situated in 27° 23' N. and 89° 27' E. Paro is the head-quarters of the Paro Penlop, the governor of Western Bhutān.

Pempa La.—Pass in the State of Bhutān, situated in 27° 39' N. and 89° 15' E.

Punaka.—Winter capital of the State of Bhutān, situated in 27° 35' N. and 89° 51' E., on the left bank of the Būgni river, 96 miles east-north-east of Darjeeling. Punaka is a place of great natural strength.

Tongsa.—Village in the State of Bhutān, situated in 27° 30' N. and 90° 28' E. Tongsa is the head-quarters of the Tongsa Penlop, the governor of Eastern Bhutān.

Trash-chöd-zong.—Summer capital of the State of Bhutān, situated in 27° 20' N. and 91° 34' E. It lies in the valley of the Chin-chu or Raidāk river, entirely surrounded by lofty mountains.

Tule La.—Pass in the State of Bhutān, situated in 27° 7' N.

and $89^{\circ} 0' E.$, 10,000 feet above the sea. By it the road from Sipchu to Paro crosses the range dividing the Di-chu and Amo-chu valleys.

French Possessions.—The head-quarters of the Governor of French India are at Pondicherry; and the French Possessions comprise five Settlements, with certain dependent *loges* or plots. They aggregate 203 square miles, and had a total population in 1891 of 286,347 persons and in 1901 of 273,185. These totals were made up as follows: Pondicherry, area 115 square miles, population (1901), 174,456; Kārikāl, 53 square miles, population 56,595; Mahé, 26 square miles, population 10,298; Yanam, 5 square miles, population 5,005; and CHANDERNAGORE, 4 square miles, population 26,831. Except the last, these possessions are all located within the Madras Presidency. The greater part of the decline in the population during the decade ending 1901 occurred at Kārikāl.

The first French expedition into Indian waters, with a view to open up commercial relations, dates as far back as 1603. It was undertaken by private merchants at Rouen; but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first *Compagnie d'Orient*, but its efforts met with no success. Colbert reconstituted the Company on a larger basis in 1664, granting exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India, and its President, Caron, founded in 1668 the *Comptoir* or agency at Surat. But on finding that city unsuited for a head establishment, he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Coromandel coast, in 1672 seized St. Thomé, a Portuguese town adjoining Madras which had for twelve years been in the possession of Holland. He was, however, compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending, when one of its agents, the celebrated François Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thomé, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Rājā of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who

wrested it from him in 1693, and held it until it was restored to the French by the Peace of Ryswick in 1697.

Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta; like Calcutta, its site was purchased by a European Company from a native prince; and what Job Charnock was to Calcutta, François Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed governor, and under his able management Pondicherry became an entrepôt of trade. Chander-nagore, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi emperor; Mahé, on the Malabar coast, was obtained in 1725-6, under the government of M. Lenoir; Kārikāl, on the Coromandel coast, under that of M. Dumas in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

The war of 1741 between France and England led to the attack alike of Madras and of Pondicherry, the capitals of the English and French Companies in Southern India. La Bourdonnais equipped at his own expense a fleet, and laid siege to Madras, which capitulated on September 21, 1746, and was ransomed for £400,000. The English in due time made reprisals. On April 26, 1748, they appeared before Pondicherry, but eventually retired after a most skilful defence of the town conducted by the famous Dupleix during forty-two days. The Peace of Aix-la-Chapelle put a stop to further hostilities, and left Dupleix free to further his dream of an Indian empire for France. Between 1746 and 1756, by a happy mingling of clever diplomacy and fearless daring, Dupleix and his lieutenants passed from success to success until the French reached the height of their power in the South. He obtained from the Mughal emperor at Delhi the title of Nawāb; established a protectorate over the *Sūbah* of Arcot and other parts of Southern India; made large additions to the French territory around Pondicherry, Kārikāl, and Masulipatam; and extended the French authority over the four Sarkārs of Mustafānagar, Ellore, Rājahmundry, and Chicacole, and the island of Srirangam, formed by two arms of the Cauvery. These various annexations opened up to French commerce 200 leagues of sea-board, and yielded a revenue of £800,000 (20 million francs).

This period of power proved of short duration. Dupleix,

feebly supported by the Court of Versailles, met with a series of reverses from the English Company, and was recalled to Paris in 1753. A certain extent of the territory still remained to his successor; but during the Seven Years' War the Government of France could afford no reinforcements for its Indian possessions. The English Company overran them, defeated the French at Wandiwāsh, and seized Arcot. Lally-Tollendal, after a chivalrous defence, surrendered Pondicherry on January 6, 1761. The English demolished the town; the wall, the forts, the public buildings, were all destroyed. Most of the captured troops and Europeans in the French Company's service were deported to France.

Two years later, the peace of 1763 restored Pondicherry and the other Indian factories to the French, but with their former territories greatly curtailed. The abolition of the monopoly of the French Company in 1769 threw open the trade, and Pondicherry began to show signs of new vitality. But in 1778 it again fell into the hands of the English East India Company. In 1782 the Bailli de Suffren made a brilliant effort on behalf of his countrymen, fighting four naval battles with the English in seven months, and retaking the fort of Trincomalee. Next year, the Treaty of Versailles restored Pondicherry and the other factories to the French, January 20, 1783. But the English Company took advantage, as usual, of the breaking out of the next war in Europe to seize the French possessions in India, and again compelled their rivals to evacuate their settlements in 1793. The Peace of Amiens once more restored them to the French in 1802; on the renewal of hostilities, the English Company again seized them, September 11, 1803. Pondicherry thus passed for the fourth time under British rule; and, during the long Napoleonic wars, the French power ceased to exist in India.

Pondicherry and the other factories were restored to the French by the treaties of 1814 and 1815, the territories being finally reduced to their present limits. The French had to begin the whole work of their Indian settlements *de novo*; and an expedition arrived at Pondicherry on September 16, 1816, to re-enter on possession. On December 4, 1816, Pondicherry and Chandernagore were delivered over to them; Kārikāl on January 14, 1817; Mahé, on February 22, 1817; and Yanam, on April 12, 1817. A convention between the Governments of France and England, dated March 7, 1815, regulated the conditions of their restoration. The French renounced their former right, under the convention of August 30, 1787, to

claim annually from the English East India Company 300 chests of opium at cost price, and agreed to pay henceforth the average rates realized at the Calcutta sales. They also bound themselves to make over to the English Company, at a fixed price, all surplus salt manufactured within their restored territories over and above the requirements of the local population. In compensation for these concessions, the English agreed to pay 4 lakhs of sicca rupees (one million francs, or, say, £40,000) annually to the French Government. As it was found that the right to make salt at all in the French Settlements led to the smuggling of that article into the surrounding British Districts, the French Government was induced, on May 13, 1818, to surrender it altogether for an annual payment of 4,000 pagodas (33,600 francs, or, say, £1,344). This second treaty, although at first made for only fifteen years, has been indefinitely prolonged; the British Government supplying the French authorities with salt at cost price, and allowing the latter to sell it to their own subjects at their own rates. Difficulties still continue regarding the supply of arrack, or country liquor, that made in Pondicherry being cheaper than the British product after it has paid the heavy excise duty, and special arrangements are required along the Pondicherry border. The cost of manufacture of toddy (palm-juice liquor) is about equal in the two territories, and no complications ensue. The tariff on imports into British India also necessitates the maintenance of a special land customs establishment all along the intricate frontier of the Pondicherry Settlement.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. He is assisted by a minister of the interior, secretaries in the different administrative departments, and a principal judicial officer. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Ten municipalities or communal boards were erected under a decree issued in 1880: namely, at Pondicherry, Oulgaret, Villenour, Bahūr, Kārikāl, La Grande Aldéc, Nedun-gādu, Chandernagore, Mahé, and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance, and a court of appeal compose the judicial machinery. The army and establishments connected with the Governor and his staff at Pondicherry, and those of the local governors or *chefs de*

service at Chandernagore, Yanam, Mahé, and Kārikāl, together with other head-quarters charges, necessarily engross a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of a Préfecture Apostolique, founded in 1828, consisting of a Préfet Apostolique and a body of priests for all French India; and of the Missions Étrangères, the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements, a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the only legal tender within French territories. The system of education is progressive to a satisfactory extent. A line of railway running via Vîllenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Kārikāl is linked to the same railway by the branch from Peralam. The telegraph is working throughout the Settlements. A Chamber of Commerce consisting of fourteen members, nine of them Europeans or persons of European descent, was reorganized in 1879. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilization. It forms the head-quarters of the French national line of steam communication with the East, the Messageries Maritimes. The total sea-borne exports from French India in 1904 were returned at £1,209,000, of which £409,000 was with France, £113,000 with French colonies, and the remainder with other countries, chiefly British. The imports by sea in the same year were valued at £232,000, of which £202,000 came from foreign countries and the remainder from France and her colonies. The number of ships entering ports in the French Settlements in the same year was 413, with an aggregate burden of 683,727 tons.

Chandernagore (*Chandarnagar*).—French settlement situated in 22° 52' N. and 88° 22' E., on the right bank of the Hooghly, a short distance below Chinsura. Population (1901), about 25,000. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix,

during whose administration more than 2,000 brick houses were erected, and a considerable maritime trade was carried on. In 1757 the town was bombarded by the English fleet under Admiral Watson, together with a land force commanded by Clive, and captured, the fortifications and houses being afterwards demolished. It was restored to the French in 1763, but was retaken when hostilities were renewed in 1794. It was again restored by the Peace of Amiens in 1802, but was retaken in the same year and was held by the English till 1816, when it was finally restored to the French.

The former grandeur of Chandernagore has disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian Railway is just outside French territory, 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator, who is subordinate to the Governor of the FRENCH POSSESSIONS. On the assumption of the opium monopoly by the British, the French Government of Chandernagore obtained by the convention of 1815 the right to purchase 300 chests of opium annually at the auction sales held in Calcutta, at the average price obtained at the monthly sales. This right has, however, been commuted for the payment of an annual subsidy of Rs. 3,000 to the French Government; and a further subsidy of Rs. 2,000 a year is also paid to that Government in consideration of their undertaking to suppress the smuggling of opium from their territory into British India, or the traffic by export or import of any opium other than that purchased at the Hooghly treasury. The peculiar situation of Chandernagore affords unusual facilities for the escape of thieves and for the operations of smugglers in opium and other excisable articles. The chief public institution is the Collège Duplex, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Administrator. There is also a bust of Duplex in a little Square.

Farāsdānga.—A French settlement or *loge* on the outskirts of BALASORE TOWN, Bengal. The settlement was established towards the close of the seventeenth century, but much of the land comprised within it has been washed away, and its total area is now only 38 acres. This plot of land is under the authority of the Administrator of Chandernagore, and is leased out annually by public auction.

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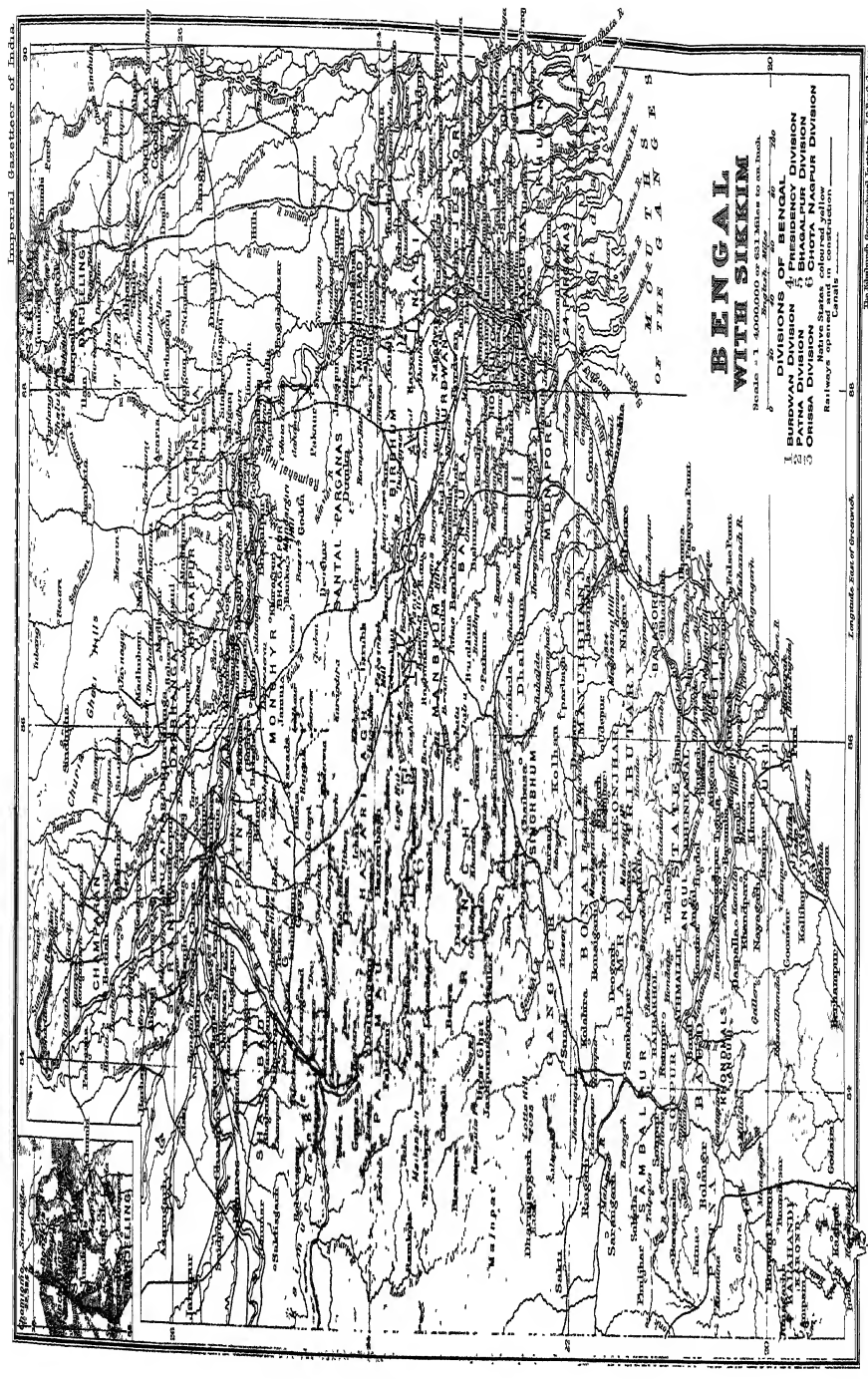
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BENGAL WITH SIKKIM

Scale = 1:400,000 or 62.5 miles to an inch.

- DIVISION OF PRESIDENCY**
- 1. BURDWAH DIVISION
 - 2. PATNA DIVISION
 - 3. CHITTAGONG DIVISION
 - 4. PRESIDENCY DIVISION
 - 5. BHAGALPUR DIVISION
 - 6. JAMSHEDPUR DIVISION
- Native States coloured yellow
Railways shown in construction
Canals

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